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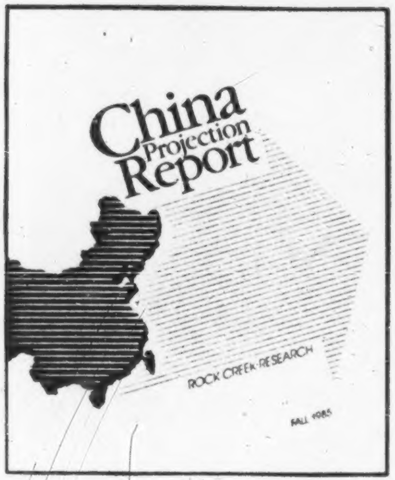
China Projection Report

ROCK CREEK RESEARCH

FALL 1985

China Projection Report


China
Projection
Report
ROCK CREEK RESEARCH
FALL 1985

A comprehensive review and realistic forecast of China's current economic trends through 1990 and beyond.

ROCK CREEK RESEARCH

November 1985

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CHAPTER ONE - Introduction

The series of remarkable economic reforms in China since 1978 and the sustained rapid economic growth through 1985 offer the prospects of an increasingly commercial and privately managed economy growing rapidly throughout the remainder of the twentieth century. The trend projections in this report show that China is likely to have a GNP in the year 2000 equivalent to Japan's today. At the same time, sources of information about China and China's economy are growing even faster than China's GNP. Scholars and other researchers who have followed the Chinese economy for many years are suddenly faced with the new task of absorbing and sorting out these many new data. The Rock Creek Research **China Projection Report** offers a thorough review of what is known to date about China's economy and what that information reveals about China's likely future development.

To summarize, China's recent performance, both the reforms and the growth success, point to a major break with China's Maoist past. In fact, it might be more accurate to say that China's Maoist period was a major punctuation mark in a development process bringing China from its periods of civil war, foreign invasion and domestic collapse in the 19th and 20th centuries to a new period of commercial and industrial expansion based on private ownership and orderly international economic relations with the rest of the world.

The major events necessary for explaining recent trends and understanding their projection into the future are all related to China's program of reforms. Rural assets are now essentially private, prices have shifted in favor of agriculture, the entire commune system is gone, and rural marketing institutions and regulations have made farmers into entrepreneurs. Control of industrial enterprises has been decentralized from ministries and local government organs to the managers of enterprises themselves. Industrial prices are shifting rapidly in 1985 to reflect the scarcity of critical raw materials as well as the inflated cost of low quality consumer goods. Bankruptcy is being introduced experimentally. Free markets, both urban and rural, are changing consumer commercial patterns, and the open encouragement of horizontal transactions between enterprises is leaving government organs increasingly divorced from economic management. There are reforms in banking, state finance, international trade, and a host of other economic dimensions. In short, the entire Chinese economic system is becoming largely unrecognizable from what it was ten years ago.

The growth accompanying these reforms -- GNP in 1984-85 is averaging well over 10 percent -- is due both to the reforms themselves and to a combination of fundamental conditions which make continued growth so likely. Perhaps the most fundamental of these factors is China's high quality leadership, especially by third-world standards. China's labor force is literate and healthy. China has long experience with commercial and industrial management, again, especially by poor country standards. The relatively egalitarian distribution of productive assets, especially agricultural land, can form the basis for an economic middle class. Control over individual enterprise management decisions by central government agencies is now much weaker. Population growth has slowed significantly. China's has a very strong natural resource base, not only in energy but also in metals and other raw materials. Large gains can be made from technology transfer, given China's relatively low starting position. China has strategic significance for major Western powers, which ensures their cooperation. Finally, there are many historical precedents in China for a period of sustained commercial expansion after historical epochs of chaos and consolidation. Only a few of these factors would give a poor country good prospects for sustained development. China's endowment with all of them makes it difficult to believe that the current process will be easily stopped or undone.

There are nevertheless numerous analyses of China's recent experience which suggest a reversal. On examination, however, the fears are difficult to justify. Whether it be internal political rebellion, military resentment, objection to "Western" morals, energy and transport bottlenecks, or even the death of Deng Xiaoping, the scenarios for an undoing of China's new organization are not persuasive. As the discussion in Chapter Two explains, fundamental forces seem to be at work, not only forces of fatigue with the past, but forces of pride and hope that China can use its new system to attain goals its old system could not reach. That is why even Deng Xiaoping may no longer be essential. The promise of success is the strongest reason for China's leadership, whoever it is, to consolidate the reform program and manage its evolution.

The Rock Creek Research **China Projection Report** considers what China's economy has become and what it could be, in numerous dimensions, if current trends continue. Its ten substantive chapters and 58 tables review the most recent results for industry, energy, investment, banking, state finance, international trade, balance of payments, agriculture, commerce, transport, and population. Most of these sectors and areas are covered through the first half of 1985, and some through the third quarter. At the same time, a comprehensive computer model of China's economy, broken into 11 essential sectors, provides constant-priced and current-priced projections of China's economic future. The projections are not the mechanical results of a computer running itself. Rather they are the result of painstaking considerations and evaluations, using the computer to maintain consistency among assumptions and technical economic requirements.

One conclusion that can be drawn from the **China Projection Report** is the abundance of reliable and useful data now available for China's economy. Historical data in the report are virtually all from official sources. In addition, numerous missions to China by international agencies and government agencies, as well as the extensive statistical experience of Rock Creek Research staff in China, have verified Chinese methodology in collecting and summarizing its statistics. By poor country standards, China's data are of very high quality and are continuing to improve in both coverage and conceptual basis. The new five year plan for 1986-90 has shifted from the Marxist measure of output, NMP (Net Material Product), to the Western measure, GNP (Gross National Product, which for China is virtually identical to a second preferred measure, GDP, that is, Gross Domestic Product). In short, rather than being a source of doubt about our knowledge of China's development progress, China's data are increasingly a source for understanding and evaluation.

Each of the chapters which follow has similar organization. After an EXECUTIVE SUMMARY, there are sections on TRENDS, POLICY, PROBLEMS, and PROSPECTS. No topic fits neatly into these four categories, but they aid both the analysis of each sector and reference to the report's findings.

CHAPTER TWO - Macroeconomy

EXECUTIVE SUMMARY

TRENDS

- * China's double-digit Gross Domestic Product growth in 1984-85 accelerates a longer period of growth relatively balanced between agriculture and industry.
- * Slow population growth and rapid decline in rural populations are transforming the Chinese labor force.
- * Nearly half of the growth comes from a high rate of investment.
- * After a large 1985 trade deficit, China's reserves have fallen and its debt is up.

POLICY

- * Fundamental reforms transforming China from a centrally-planned to a private economy are largely responsible for the growth.

PROBLEMS

- * The major problems are ones of adjustment, which will delay but not reverse current trends.
- * Deng's leadership may no longer be essential.

PROSPECTS

- * By the year 2000, China will have a Gross Domestic Product roughly equal to Japan's today.
- * Prospects are excellent for continuation of the reform program.

TRENDS

An overview of China's recent macroeconomy reveals a remarkable growth performance, by various measures, with its sources in both strong investment and a host of non-investment sources. All of the growth is related to the vigorous program of reforms implemented since 1978 which have changed the very foundations of the Chinese economy, converting it, by degrees, to a de-facto market

Table 2-1
CHINA'S GROSS DOMESTIC PRODUCT, 1981-2005
(Percent Annual Growth)

	Agriculture	Industry	Other	GDP Total	GDP Per Capita
1981	8.1	2.5	7.7	6.5	5.1
1982	13.1	6.8	-1.2	8.1	6.5
1983	9.5	11.7	4.8	9.0	8.0
1984	12.9	15.8	15.5	14.2	13.1
1985	4.2	19.4	12.8	10.0	8.7
1986	9.3	10.3	10.6	9.9	8.7
1987	7.0	11.5	12.8	9.6	8.3
1988	6.3	10.5	13.0	9.0	7.8
1989	6.0	10.3	11.8	8.6	7.5
1990	5.2	9.7	10.8	7.9	6.7
1995	4.9	7.6	8.2	6.4	5.4
2000	5.7	6.5	6.8	6.2	5.1
2005	7.4	5.9	5.4	6.1	5.2

SOURCES: Official State Statistical Bureau data and RCR calculations.

economy governed by financial incentives rather than physical output targets. China's international economic relations have broadened rapidly, but show China to be critically constrained by foreign exchange shortages. For this reason, exports and imports of such basic commodities as grain and energy follow patterns which are different from what one might expect from conditions of domestic scarcity. The tables and text which follow serve as an introduction to the most basic macroeconomic trends, both through 1985 and as they could be extended into the future. For much more detailed discussions of these trends, see the chapters on individual sections which follow.

Table 2-1, above, shows that China's GDP (Gross Domestic Product) has accelerated strongly from 1980 to 1984 in a remarkable performance of sustained growth. As China officially measures its output, there are various sources of exaggeration and some important omissions. By converting official data to the Western GDP basis, a much more accurate picture is obtained. Even with these corrections, which involve the addition of service sector output and correcting for China's unrealistically high industrial pricing, we know enough about 1985 to say that it will be the second consecutive year of double-digit real growth (corrected for inflation), following two previous years of 8 and 9 percent growth respectively.

What is also significant is the balanced pattern of this growth, and in particular the strong and sustained role played by agriculture. Only the output record for "other," which includes service industries as well as construction and transport, is shown by preliminary official data to be weak in the early 1980s. Future revisions of those data may clarify the record. However, since the end of the 1980-82 period of "Readjustment," and in particular in 1984, growth was very high in all sectors of the economy.

Table 2-2
CHINA'S GROSS DOMESTIC PRODUCT, 1980-2005
(Billion Constant 1980 U.S. Dollars*)

	Agriculture	Industry	Other	GDP Total	GDP Per Capita
1980	119.8	63.5	56.1	239.3	242
1985	188.4	107.2	81.4	377.0	360
1990	261.3	176.4	142.3	580.0	525
1995	332.2	254.5	210.9	797.6	683
2000	438.8	349.1	292.7	1,080.7	876
2005	624.7	464.8	380.5	1,470.0	1,128

* NOTE: Except for per capita GDP, which is in U.S. dollars.
SOURCES: Official State Statistical Bureau data and RCR calculations.

Overall, GDP growth in 1985 is roughly 10 percent over 1984, with particularly rapid growth in industry. Following 1984's very strong record, 1985's results are mixed largely because of weather conditions, in particular typhoon flooding and widespread drought. Nevertheless, agricultural output will still be high by international standards for rural growth. Industrial output in 1985 is extremely high. Growth of gross industrial output through September was 22 percent over that in the first three quarters of 1984, and although the monthly output pace slackened in August and September, growth for the year will still be close to 20 percent over 1984.

The pattern of these recent macroeconomic growth trends implies that the same trends could, to some degree, continue into the future. The most important patterns related to the recent growth are accelerating investment and the implementation of reforms, which by 1985 have been instituted firmly enough to make their reversal difficult. If these trends continue, even modified, they will show China's own projections to be conservative. The implications of China's current economic performance are presented in Tables 2-1 and 2-2, above, and Tables 2-3 and 2-4, below.

Table 2-3
CHINA'S GROSS OUTPUT, 1981-2005
(Percent Annual Growth)

	Agriculture	Heavy Industry	Light Industry	Total Industry	Gross Product Total
1981	5.9	-4.7	14.1	4.5	4.4
1982	11.3	9.8	5.7	7.8	9.0
1983	7.7	12.4	8.7	11.2	10.0
1984	11.7	14.2	13.9	16.3	13.8
1985	6.0	15.3	19.8	19.6	16.5
1986	9.0	8.8	9.6	11.1	11.4
1987	7.2	9.8	12.9	12.8	12.3
1988	6.4	9.4	12.3	11.9	11.5
1989	6.2	8.8	12.4	11.9	11.2
1990	6.0	7.7	12.0	11.4	10.7
1995	5.6	6.4	9.9	9.4	9.0
2000	6.4	5.3	8.2	8.3	8.1
2005	8.0	4.7	6.9	7.6	7.5

* NOTE: Total industry includes brigade industry; Gross product total includes gross output of tertiary sectors, productive and non-productive.
SOURCES: Official State Statistical Bureau data and Rock Creek Research estimates.

Table 2-4
CHINA'S GROSS OUTPUT, 1980-2005
(Billion Constant 1980 Yuan)

	Agriculture	Heavy Industry	Light Industry	Total Industry	Gross Output Total
1980	198	264	233	522	936
1985	297	409	417	910	1,555
1990	415	626	730	1,590	2,671
1995	546	852	1,171	2,495	4,113
2000	744	1,104	1,742	3,715	6,074
2005	1,090	1,391	2,434	5,357	8,722

* NOTE: Total industry includes brigade industry; Gross product total includes gross output of tertiary sectors, productive and non-productive.
SOURCES: Official State Statistical Bureau data and Rock Creek Research estimates.

In comparing current trends with China's own targets, it is immediately apparent that growth will have to slow dramatically in the near future if output is to be limited to the stated goals. The most well-known target is the oft-repeated one of quadrupling the gross output value of agriculture and industry between 1980 and the year 2000. As Table 2-4, above, makes clear, the relatively modest projections of current trends presented will quadruple the gross value of agriculture and industry by 1995, not 2000. Projections of per-capita GDP in constant dollars (see column 5 in Table 2-2) also show that China will easily accomplish the goal of 800 dollar per-capita output. Recent statements by agricultural officials that agriculture alone can quadruple its output over the same 20-year period, however, are probably unrealistic, although farm GDP could grow faster than the traditional Chinese gross output measure because of the increasingly labor-intensive nature of China's new agriculture.

Table 2-5
POPULATION GROWTH AND URBANIZATION

	Population (Million)			Population Growth (Percent)			Share of Total (Percent)	
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1980	796	191	987	.66	3.49	1.19	80.6	19.4
1981	799	202	1,001	.42	5.39	1.38	79.8	20.2
1982	804	212	1,015	.61	4.87	1.47	79.2	20.8
1983	784	241	1,025	-2.51	14.05	.94	76.5	23.5
1984	705	330	1,035	-10.08	36.81	.96	68.1	31.9
1985	636	411	1,047	-9.80	24.49	1.14	60.7	39.3
1986	592	466	1,058	-6.80	13.38	1.12	56.0	44.0
1987	570	500	1,070	-3.80	7.36	1.11	53.3	46.7
1988	554	528	1,082	-2.80	5.56	1.11	51.2	48.8
1989	544	550	1,094	-1.80	4.15	1.10	49.7	50.3
1990	540	566	1,106	-.80	2.98	1.10	48.8	51.2
1995	516	652	1,168	-.90	2.90	1.10	44.2	53.8
2000	521	713	1,234	.20	1.80	1.10	42.2	57.8
2005	536	767	1,303	.60	1.40	1.10	41.2	58.8

SOURCES: Official State Statistical Bureau data and Rock Creek Research estimates.

For China's rural and urban economies alike, population growth and movements are having and will continue to have a profound influence. Table 2-5, above, shows China's two most significant demographic trends: the success in slowing the overall population growth rate and the extraordinary pace at which the rural population is urbanizing. Beginning in the 1970s, China's crude population growth rate began to slow significantly, and by the early 1980s it was approaching 1 percent a year. Although there is evidence of some relaxation of the one-child policy for certain circumstances, effective population control by third-world standards is very likely.

Much more dramatic than the gradual slowing of overall population growth is the explosion in China's urban populations, as rural peasants move to towns, and as areas once considered rural acquire the status of urban areas. By whichever method, the increase in city-dwellers must be having a major influence on work and consumption patterns. The trends in 1983-84, for which there are official data, show the rural population falling by as much as 10 percent a year. Trends such as this are not likely to continue, although the very high growth in industrial output in 1985 may signal, temporarily, an even stronger shift. The trend projections in Table 2-5, above, show that if the urban movement moderates slightly and then slows significantly by the late 1980s, China's urban population will be 50 percent of the total by 1988 or 1989.

Although this rapidly increasing urban population and the increasingly sophisticated labor force it may be creating are important explanations for China's overall growth record, the most significant source of China's growth is the combination of strong investment and improved incentives under the general reform program. The role of investment is presented in Table 2-6, below, which combines an analysis of China's high savings and capital accumulation rate with investment's productivity to determine how much growth is due to investment and how much to other factors, such as labor and more efficient management.

Table 2-6
SAVINGS, INVESTMENT, AND SOURCES OF GROWTH **

	NMP* Savings	GDP* Savings	Capital Productivity	Productivity Growth	Real NMP* Growth	from Investment	from Other Sources
1980	31.6	28.1	.227	--	--	--	--
1981	28.5	25.3	.222	-2.2	4.9	7.2	-2.3
1982	29.0	25.6	.227	2.3	8.2	6.3	1.9
1983	29.7	26.2	.232	2.2	9.8	6.6	3.2
1984	31.2	27.4	.243	4.7	13.9	6.9	7.0
1985	34.5	30.2	.254	4.4	12.4	7.6	4.8
1986	34.0	29.7	.256	0.7	9.5	8.8	.8
1987	33.1	28.8	.258	0.8	9.6	8.7	.9
1988	32.2	27.9	.259	0.3	8.9	8.5	.4
1989	31.3	27.1	.259	0.3	8.7	8.3	.3
1990	29.4	25.3	.259	-0.2	7.9	8.1	-.2
1995	29.0	24.6	.243	-1.3	6.4	7.8	-1.4
2000	29.0	24.1	.227	-1.3	5.9	7.3	-1.4
2005	29.0	23.6	.216	-0.1	5.8	6.9	-1.1

* NOTE: NMP stands for Net Material Product, the Chinese/Marxist equivalent to Gross Domestic Product (GDP), the usual measure of value-added in the West.
** UNITS: All growth and savings rates are percent. Capital productivity is output per value of capital.
SOURCES: Official data and Rock Creek Research estimates.

China's rate of saving and capital accumulation, the share of its output it does not consume but rather dedicates to plant and equipment for future output, is relatively high by world standards, especially poor-country standards. Because the official Chinese savings rate data are based on NMP (Net Material Product), which is smaller than GDP, the usual output measure in the West, Table 2-6 gives China's saving rate by both measurements. In each case, China's savings rate is close to or greater than 30 percent of output. As the quality of investment goods improves, this rate of accumulating capital should continue to support the output growth trend.

As Table 2-6 also shows, however, not all of China's growth is explained by increases in capital stock, given estimates of capital's productivity. Other sources of growth include improved labor skills and increased labor supplies for labor-intensive technologies, natural improvements in efficiency of existing capital, better management at the enterprise and at the national level, and, certainly, weather for agriculture. All of these factors are important for understanding the current trends in China's output. The historical data show that other sources of growth have at times accounted for as much as half of China's output increase.

The significance of these trends, both for investment and non-investment sources of growth, is that they may continue into the latter 1980s and the 1990s. Because the non-investment sources of growth may be only temporary and related to the implementation of the various reform movements, the trend projections in Table 2-6 have not given them much importance after 1985. At the same time, the rate of saving and capital accumulation is assumed to decline gradually after its high level in 1985 (based on data reported for June and the third quarter). As a result, the trend projections presented in all the output tables in this chapter are based on rather conservative assumptions about continuation of trends behind China's recent growth surges. In the 1990s, non-investment sources of growth are posited to be significantly negative, as China's output in all sectors becomes increasingly capital intensive. It is because of these restrained assumptions behind this report's projections of Chinese output that China's official targets for 1990 and 2000 appear conservative.

Although a great deal of attention has been paid to China's domestic economy, the rapid growth in China's international economic transactions is equally as dramatic. Tables 2-7 and 2-8, below, review the recent record in China's trade, current account, and capital account balances.

Table 2-7
CHINA'S CURRENT ACCOUNT BALANCE, 1980-2005
(Billion Current U.S. Dollars)

	Exports	Imports	Trade Balance	Invisibles Net	Current Account Balance
1980	18.1	17.8	.3	.3	.6
1981	22.0	20.0	2.0	.4	2.4
1982	21.1	17.5	3.6	1.4	5.0
1983	20.7	20.1	.6	2.3	2.9
1984	23.9	23.9	.1	2.0	2.1
1985	22.8	33.9	-11.2	1.9	-9.3
1986	21.9	24.1	-2.2	1.8	-.4
1987	24.2	24.4	-.1	2.0	1.9
1988	26.6	27.8	-1.2	2.2	1.0
1989	29.7	31.2	-1.5	2.5	1.0
1990	33.7	35.3	-1.6	2.8	1.2
1995	50.1	52.3	-2.2	4.2	2.0
2000	77.2	80.9	-3.7	6.5	2.8
2005	123.8	127.9	-4.1	10.4	6.3

SOURCES: China Customs Administration, Bank of China, Ministry of Foreign Trade, and Rock Creek Research estimates.

In brief, China's trade and payments have seen strong earnings in the early 1980s, after the deficits and foreign exchange difficulties associated with the "mini-Great Leap" in the late 1970s and the 1979 fighting with Vietnam. By 1984, as seen in Table 2-7, above, China had accumulated roughly 14 billion dollars of foreign exchange reserves. However, in association with the investment boom in 1984-85, the large late-1984 increases in the money supply, the decentralization of both banks and foreign trade enterprises, imports in late 1984 and early 1985 expanded rapidly. Imports in the first eight months of 1985 were up 50 percent over the same period in 1984. At the same time, exports stagnated from late 1984 through 1985's third quarter; the resulting trade and current account deficit is seen clearly in Table 2-7, above. Because of rather strong efforts in mid- and late-1985 to control imports, including a gradual devaluation of the yuan begun in September, imports appear likely to fall significantly in late 1985 and in 1986. The result will be a much smaller deficit and an eventual current account surplus.

Table 2-8
CHINA'S CAPITAL ACCOUNT BALANCE, 1980-2005
(Billion Current Dollars)

	Lending (Net)	Increase In Reserves	Capital Account Balance	Errors and Omits	Foreign Exchange Reserves	Net Foreign Debt
1980	-1.8	.1	-1.7	2.1	1.9	.9
1981	.7	2.5	3.2	-1.2	4.4	1.6
1982	-.3	6.3	6.0	-.9	10.7	1.3
1983	.2	3.6	3.9	-1.0	14.3	1.5
1984	1.0	.1	1.1	1.0	14.4	2.5
1985	-4.5	-4.7	-9.3	.0	9.7	7.0
1986	2.2	-2.6	-.4	.0	9.8	4.8
1987	1.6	.3	1.9	.0	7.4	3.2
1988	.5	.6	1.0	.0	7.9	2.7
1989	.5	.5	1.0	.0	8.4	2.2
1990	.6	.6	1.2	.0	9.0	1.6
1995	-2.4	4.4	2.0	.0	13.4	4.0
2000	-4.5	7.3	2.8	.0	20.7	8.5
2005	-5.7	12.0	6.3	.0	32.8	14.2

SOURCES: China Customs Administration, Bank of China, Ministry of Foreign Trade, and Rock Creek Research estimates.

As a result of the large 1985 trade and current account deficits, China both drew down its foreign exchange reserves in 1985 and began to borrow in significant amounts. Because China has published foreign exchange data for the first half of 1985, the level of borrowing (negative net lending) can be estimated. Table 2-8, above, shows these trends and the associated falls in China's reserve position. Foreign reserves will probably have fallen below 10 billion dollars by the end of 1985, and China's very modest debt will have grown by nearly 5 billion dollars.

The continuation of such trends, however, is unlikely, given China's difficulty in earning foreign exchange and her generally conservative fiscal policy posture, both domestically and internationally. The trends shown above in Tables 2-7 and 2-8 for the late 1980s and the 1990s are just one of many possible strategies China could pursue. The significant element in this conservative trade policy is its impact on the speed of technology transfer. The non-investment sources of growth in Table 2-6, above, are so low in large part because of this assumption of reduced imports rather than large-scale borrowing. If China decided that it could productively absorb larger amounts of foreign technology and was willing to borrow to acquire it, the economy's overall growth rate into the next decade would be higher than it has been projected in this chapter. In addition, certain bottlenecks associated with China's resource endowment, such as energy and land for grain, could be eased. Trends in China's grain and energy balances are presented in Tables 2-9 and 2-10, below.

Table 2-9
CHINA'S GRAIN BALANCES
(Million Tons)

	Production	Intermediate Use	Final Consumption	Total Consumption	Exports	Imports
1980	320.6	113.7	229.5	343.2	1.0	23.6
1981	325.0	115.3	235.0	350.3	.8	26.0
1982	354.5	123.1	262.2	385.3	.8	31.6
1983	387.3	130.4	276.0	406.4	1.3	20.4
1984	407.3	135.3	283.4	418.7	3.2	14.7
1985	389.4	106.3	292.7	399.1	4.5	14.2
1986	414.0	165.6	262.3	427.9	1.5	15.4
1987	417.9	145.6	285.8	431.4	1.8	15.3
1988	419.8	144.0	290.9	434.9	1.9	17.0
1989	421.7	131.4	306.8	438.3	1.9	18.5
1990	423.6	130.7	311.2	442.0	2.0	20.4
1995	444.7	153.3	320.4	473.7	1.9	30.9
2000	435.3	154.8	326.2	481.0	1.8	47.6
2005	422.2	162.5	331.1	493.6	1.7	73.1

SOURCES: China Customs Administration, State Statistical Bureau, and Rock Creek Research estimates.

The grain balances presented above in Table 2-9 reflect a difficult problem in China's economic policy-making. Demand for grain could be expected to increase significantly in the coming decades, as more raw foods are processed, and as more grains are needed for the ambitious meat and dairy industry plans. However, China has very limited arable land relative to its population, and much of that land is near urban areas, making cultivation of higher value-yielding crops, such as vegetables and fruits, much more profitable. Lower value-added staples might well be imported, as they are in Japan and to some extent in South Korea. For China, however, this represents a use of foreign exchange with only indirect benefits to technology transfer and industrial modernization. As a result, China is likely to constrain its imports of grain, while the shifting of planted land to other crops continues. These shifts have been taken into account for the trends shown in Table 2-9, above. Both production and consumption growth are modest, and although China maintains an indefinite grain deficit, it is not extremely large relative to the overall trade picture.

Just as China imports less grain than she might otherwise to conserve foreign exchange, she exports more energy than she otherwise would to earn foreign exchange. Although energy is in critically short supply domestically, the need for foreign exchange earnings will continue to force China to export, particularly in a period of falling world energy prices. Table 2-10, below, gives likely trends in China's energy production, consumption, and trade.

Table 2-10
CHINA'S ENERGY BALANCES
(Million Metric Tons of Standard Coal Equivalent)

	Production	Intermediate Use	Final Consumption	Total Consumption	Exports	Imports
1980	620.3	364.1	239.3	603.4	17.6	.7
1981	615.8	387.8	211.3	599.2	16.8	.2
1982	642.1	405.7	219.4	625.1	17.4	.4
1983	687.9	404.1	267.5	671.6	16.6	.3
1984	751.5	423.2	306.3	729.5	22.3	.4
1985	830.4	428.9	374.6	803.5	27.5	.7
1986	884.4	474.6	376.6	851.1	33.8	.6
1987	946.3	513.8	393.7	907.5	39.5	.8
1988	1,004.9	544.7	416.7	961.5	44.6	1.1
1989	1,063.2	588.8	426.9	1,015.8	48.9	1.5
1990	1,119.6	634.9	433.7	1,068.6	52.9	2.0
1995	1,380.4	778.3	543.6	1,321.9	60.5	2.0
2000	1,653.7	980.7	605.3	1,586.0	69.8	2.1
2005	1,925.0	1,216.9	628.5	1,845.4	81.8	2.2

SOURCES: China Customs Administration, State Statistical Bureau, and Rock Creek Research estimates.

A major component of the energy balances shown above is the strong growth in energy output anticipated through the year 2000. The Chinese targets of doubling energy output between 1980 and that year are almost certainly conservative. For a detailed discussion of this question, see Chapter 4 on Energy. A second major component, although an indirect one, in China's energy balances is energy conservation in industry. China's energy use is arguably the worst in the world for a major economy, and the potential for conservation has already shown itself in the 1980s, as overall output has far outpaced increases in energy consumption. These trends are all important for understanding the consumption patterns above, relative to the industrial output trends projected in the chapter's earlier tables. Furthermore, the balances above are projected without anticipating finds of offshore oil in China on the scale which was once anticipated. Should that occur, China's energy position in the world would naturally change in a dramatic way.

POLICY

For the macroeconomy, the major policy position is one of reforms. One could almost say, reforms and reforms and reforms and reforms. But from all the major shifts underway for the past seven years in China, a major theme emerges: private control in the microeconomy. What are essentially significant property rights are being transferred to farmers, other individuals and to enterprise managers and groups of enterprise managers. Control is passing or has already passed from collective bodies meeting physical output targets and run by party cadres to decentralized units run for profit by professional managers. At the same time, the central government is seeking indirect methods such as control of the money supply, exchange rate, other prices, as well as the level of state spending to influence the direction of the macroeconomy.

The shift to private control and profit incentives has forced the issue of price reform, and without waiting for official changes, many prices are adjusting themselves as buyers and sellers refuse to pay or accept unreasonable rates. This adjustment of prices, which has accelerated in 1985, is in turn critical for the success of other reforms, in particular, investment reforms that give autonomy to enterprises to invest with bank loans. With pre-reform prices misinforming enterprises about the profitability of projects, price reforms are essential if individual initiatives are to result in sound decisions.

A more detailed account of individual reforms is given in the Policy sections of subsequent chapters. For reference, a partial list of major management and institutional reforms in agriculture and industry follows:

Agriculture

- The 1979 introduction of the household contract responsibility system giving control of land and herds to individuals; by 1983, over 90 percent of such assets had been transferred.
- By 1984 the contract periods had been lengthened to 15 years or longer, and contracts were made inheritable; few believed by then the lands would ever be given back to the state.
- In 1984 most communes were disbanded and rural governing authority was returned to towns and counties. By 1985 all communes were gone.
- 1985's contract procurement system replaced the 30-year-old system of compulsory deliveries of farm products to the state. Farmers were free to refuse to sign contracts for unattractive cropping patterns. A major step in the commercialization and monetarization of the rural economy.
- In June, 1985, ownership rights for herdsmen over specific tracts of expansive rangeland were promulgated, granting private control even over the semi-arid range.

Industry

- As early as 1979 the traditional Soviet emphasis on heavy industry was formally abandoned in favor of light industry, following a more East Asian pattern.
- In 1983, pilot enterprises were allowed to experiment with operating on a for-profit basis.
- By early 1984, the "Contract Economic Responsibility System" was adopted everywhere for state-owned service enterprises, making them responsible for their own profits and losses.
- In May 1984, the State Council promulgated regulations further expanding the decision-making power of state-run enterprises.
- In September, 1984, more than half of plan products were taken out of the plan, leaving decisions on levels of production to individual enterprises.
- The October, 1984, "Urban Reform Program" document was delivered, with far-reaching policies for severing relationships between enterprises and their ministries or local government supervisors. The program stipulated a wide range of managerial freedoms and price reform measures, including the right to hire and fire labor, make investment decisions, and set prices.
- In May, 1985, provinces and local governments throughout China began intensifying efforts to separate enterprises from their former

owners/supervisors, because of lessons learned in the winter.
- In the spring of 1985, experiments were begun with bankruptcy laws and procedures in selected Northeast provinces.
- July, 1985, labor and wage regulations tied pay to performance on the job.
- Setember, 1985, new State regulations allowed joint ventures for state enterprises and cooperatives that cut across different trades, regions, and cities, and different forms of enterprise ownership.

PROBLEMS

There seems to be no problem serious enough to stop the reform program, short of war with Taiwan. Major problems for China's macroeconomy are ones of adjustment in the current critical period of reform implementation. In particular, as profit incentives spread, but price adjustments lag, wide swings in prices, wages and standards of living could destabilize and delay the overall reform program, although it is unlikely that they could reverse it. A second problem is the abuse of power by local officials. Without any grasssroots democratic institutions, the honesty of local officials depends on the vigilance and willingness to discipline on the part of central authorities.

There are a host of problems usually cited by commentors on China's new reform program as serious, which in fact, although possible causes of slowdowns, do not seem to be serious enough to stop China from continuing in its new direction. A brief treatment of some of them follows.

Disgruntled party cadre opposition to the reforms and similar feelings on the part of the military are sometimes thought to represent a major lurking threat to the whole program. In fact, cadre and military personnel are entering the private sector in large numbers. Because of the Cultural Revolution, party prestige has had difficulty recovering its former strength, and the success of the current program seems to be its best chance. Similarly, the military knows that if it is going to avoid being a fourth-ranked power for the indefinite future, its capabilities must be based on a modern domestic industrial structure, something the military realizes the old system could never give it.

Corruption and pornographic influences from the West and Japan are often seen as building a groundswell of resentment for the new open-door policies and what they are doing to Chinese society. However, most Chinese know very well that corruption and various forms of sexual expression have a long tradition in China, even in Maoist China, and although moralizing by elderly cadres may serve some purposes in their political maneuverings, it is unlikely that these arguments persuade many people that the "spiritual pollution" comes from without.

There are some problems, however, which represent genuine difficulties for the program of reform. Resistance to the transfer of authority to enterprises by ministries is natural, but the destabilizing effects of rigid prices in the face of partial managerial independence could strengthen the hand of conservative ministerial and local officials arguing that they need to keep control to avoid chaos and "anarchy." In the long run, with the national policy so firmly stated, this kind of resistance to decentralization is not likely to succeed, but it could significantly delay the process.

Similarly, often cited economic problems will slow growth and cause delays, but not cause any major reversal in the basic direction of the Post-Mao program.

Even though energy bottlenecks cause significant portions of industry to operate below capacity, this shortage has also acted as an incentive to find more energy efficient methods, and given the results in energy conservation since 1980, it is apparent that shortages are having some of the same effect as higher prices; scarcity is causing conservation. For transportation, the problem is extremely serious (see Chapter 10 on Transportation), but again, with profit incentives in place, alternative solutions are beginning to appear. Foremost is highway transport as provinces and even counties are finding that local commerce can expand significantly. On a national scale, problems of transporting coal from distant mines in Shanxi are causing major investments in mines closer to the eastern industrial centers, and local mines are responsible for more than half of coal's recent impressive output growth. (See the chapter on Energy.)

The slowdown in the world economy and China's difficulty in finding markets for her light manufactures will also slow the progress of China's industrial program, limiting foreign exchange available for technology purchases. There is a long list of such problems facing China's macroeconomy, but they are similar to problems facing many poor economies trying to modernize. China's advantage lies in the new system of reforms and incentives.

The question of leadership and of Deng Xiaoping's eventual passing is important, but recedes with every year. Furthermore, given the tremendous fatigue in China following the Cultural Revolution, it is possible that were Deng Xiaoping not there, some other elderly leader would be found to symbolize what is in a fact a movement of youth in the country to move China in new directions.

PROSPECTS

Given China's recent trends of strong growth and the remarkable system of reforms supporting the economic expansion, the growth trend projections in the first section of this chapter represent possibly even conservative estimates of China's future growth. If China does grow in something like the pattern outlined, she will have a GDP in 2000 roughly the size of Japan's today. On a per capita basis, ~~of course~~, China's level will be roughly one-tenth that of Japan's now, and because of China' size, international trade will not be as important a factor in her overall economy. Nevertheless, China's economy will be large enough that it will affect the economies of virtually all other countries and territories in the region, if not the world.

Given the relatively slow growth in much of the world's economy, a sustained economic expansion by China, fueled in part by an emerging peasant middle class of tiller-owners, could support economic activity in many neighboring economies. China will have "rough edges," producing too much of this, and not enough of that. Natural opportunities for trade and investment will grow as China's economy grows. Where, ten years ago there was virtually nothing in terms of international trade and economic opportunity, in fifteen there will be a major world economy. There is resistance to this kind of thinking on the part of many observers of China's current course. It may come more slowly than the trend projections in this chapter have supposed, but on the other hand, it could also come more quickly. The prospects are excellent that China's changes are permanent.

CHAPTER THREE - Industry

EXECUTIVE SUMMARY

TRENDS

- Industrial output in 1985 is up roughly 20 percent, after 1984 growth of over 16 percent. This growth seems broad-based and sustained.
- On-going reforms in industrial management, transferring power to enterprise managers, are the primary reason for such high growth.
- Growth is especially strong in collective and village enterprises, due to ownership changes and reforms.

POLICY

- Urban reforms, introduced nationwide in October 1984, have been extended to a second phase to correct for the interception of management power by local governments.
- Credit and other controls are trying to slow the growth.
- 1985 price reforms in both industry and agriculture are correcting for low prices of some scarce goods and raw materials.

PROBLEMS

- Low quality and counterfeit goods are increasingly reported

PROSPECTS

- Even as industrial growth relaxes in 1985's fourth quarter, such growth in the middle or high teens would transform industry by 1995, with output as much as four times what it is today.

TRENDS

China's industrial sector has undergone well-documented growth in the 1980's. The recent growth record began in the early 1980s, with 1984 growth over 16 percent and 1985 growth of 22 percent in the first three quarters. There are numerous causes for this impressive growth, including rapid increases in investment, money supply, agricultural output, and a relaxation, for the time being, of energy constraints which seemed so critical in 1980-81. However, the most important reason for such high industrial growth is the on-going series of reforms in industrial management and market relationships, including a pronounced shift in growth and ownership from state to collective enterprises.

The annual growth rates for Chinese industry since 1981 show that double-digit growth is not unusual. If anything, single-digit industrial growth is the exception, as is evident from the historical pattern given in Table 3-1 below. In particular, since 1975, overall industrial growth has hovered around 10 percent, except for only two periods of particular crises, Mao's death in 1976 and 1981's state fiscal crisis from the fighting with Vietnam, high growth has been the norm for China. The double-digit industrial growth of 1984-85 seems matched in the 1977-78 period, but growth in the former period, without management and market reforms, could not be sustained.

The impressive 22 percent gross industrial output record through August 1985 is the one of the most significant recent developments in China's domestic economy. The same management reforms spurring this industrial growth are also responsible for shifting that growth towards more labor-intensive light industries and for introducing the possibility of business failures, joint ventures and shared military technology.

Table 3-1
INDUSTRIAL GROSS OUTPUT, 1975-85
(constant 1980 prices)

Year	Heavy Industry	Light Industry	Rural Industry	Total With Rural	Total Without Rural
(Percent Growth)					
1975	16.83	12.98	32.80	15.53	15.13
1976	.55	2.37	44.79	2.46	1.34
1977	14.27	14.31	23.24	14.61	14.29
1978	15.59	10.80	15.40	13.57	13.49
1979	7.67	9.64	16.40	8.82	8.51
1980	1.46	18.38	21.31	9.29	8.76
1981	-4.72	14.12	12.20	4.51	4.13
1982	9.82	5.71	9.68	7.81	7.71
1983	12.38	8.70	23.47	11.20	10.53
1984	14.23	13.86	53.24	16.30	14.05
1985 *	19.80	24.40	n/a	n/a	22.10
(Billion 1980 Yuan)					
1984	354.6	348.4	57.7	760.6	703.0

* NOTE: 1985 data are for the first 9 months over the same period in 1984.
SOURCES: Official Chinese statistics and RCR calculations. (J5cbc04.d5j)

Looking at annual trends, the 1985 results appear to be a sudden first-quarter jump in output, but, as the quarterly growth rates in Table 3-2 indicate, industrial growth began gradually accelerating from a low in late 1982. Monthly data show that the climb to 23 percent growth accelerated more clearly

Table 3-2
GROWTH OF QUARTERLY GROSS OUTPUT 1982-1985

	Year/Qtr		Heavy Industry	Light Industry	Total Industry
Growth Rates	1982	I	14.1	14.5	11.4
(percent)		II	10.5	7.3	8.7
		III	10.3	1.2	5.7
		IV	5.0	1.4	5.6
	1983	I	6.1	2.7	7.0
		II	12.6	8.0	10.5
		III	13.6	12.0	12.6
		IV	16.8	11.8	11.7
	1984	I	12.1	11.7	11.9
		II	11.5	10.8	11.1
		III	15.3	12.9	14.3
		IV	14.3	16.1	15.1
	1985	I	20.4	25.6	23.0
		II	21.9	25.8	23.8
		III	17.1	21.8	19.5
(Bil 1980 Yuan)					
	1985	II	110.48	107.68	218.16

SOURCES: China's State Statistical Bureau official data. (J5CE07.D5H) beginning in July of 1984 and rose to 17.8 percent by December. (See Table 3-3, below.) Thus the 1985 surge is a somewhat more gradual take-off from an already high plateau of late 1983 and 1984. Within that pattern of gradual acceleration, January's 24.5 percent growth did indeed mark a significant acceleration. This more gradual acceleration may imply more sustained growth.

Right from the start in early 1985, reports of growth greater than 20 percent generated widespread skepticism. None of the reasons offered, however, can explain away the nine-month industrial performance. The reported growth was not in current prices and hence was not exaggerated by inflation. The 23 percent growth of the first half of 1985 can not be accounted for by definitional changes to include rural industry. In 1984, the difference between industrial growth with and without rural industry was only 2 percentage points. Ownership shifts have not been on a large enough scale to significantly increase double-counting in gross output.

Investigation of inventory change does not confirm the build-up of vast stocks of worthless "output." Reports from a range of industries suggest that the growth boom is demand-driven, and the main complaint is of shortages rather than excess stockpiles. There are various comments in Chinese journals that stockpiles exist, but little documentation that they are increasing, automobile stocks being perhaps an exception. On the contrary, other articles specifically report inventory declines. For 1984-85, in both heavy and light industry, investigation of inventories and reports of sales imply that most inventories

Table 3-3
MONTHLY GROWTH OF INDUSTRIAL OUTPUT, 1984-1985

	Year/Month	Heavy Industry	Light Industry	Total Industry
Growth Rates (Percent)				
1984	Mar	11.7	11.9	12.1
	Apr	11.0	10.8	11.1
	May	12.4	11.7	11.7
	Jun	11.2	10.0	10.9
	Jul	14.5	12.8	13.9
	Aug	16.4	13.2	14.4
	Sep	15.1	13.1	14.2
	Oct	14.5	15.0	14.8
	Nov	17.1	16.5	16.5
	Dec	11.3	20.7	17.8
1985	Jan	22.3	26.4	24.5
	Feb	18.1	24.7	21.3
	Mar	20.5	25.7	23.0
	Apr	21.9	26.2	24.1
	May	21.7	24.4	22.8
	Jun	21.0	24.4	22.7
	Jul	18.4	22.8	20.8
	Aug	14.6	20.3	17.4
(Bil 1980 Yuan)				
1985	Aug	34.42	33.18	67.60

NOTE: Growth rates are over the same month in the previous year.
SOURCES: Official data. (J5CE06.D5H)

are falling rather than growing. Given this overall pattern of information, it is highly unlikely that a gross build-up of inventories is the explanation for 1985's reported 20 percent plus increase in industrial output.

In short, although some of the factors listed above deserve serious attention, they cannot, either individually or as a group, take much away from the record detailed by month in Table 3-3. In contrast to the many weak arguments which discount or dismiss China's industrial record, optimistic signs provide convincing support that the high growth rate is accurate.

For example, relative to past years, physical output growth of a large number of individual products is extremely high. From electric fans to beer, woolen goods to coal to plate glass and internal combustion engines, physical output is 20 percent, 30 percent, 40 percent, and in come cases 50 percent over the same period in 1984. (Output levels and growth for these and other commodities are found in the Statistical Appendix to this chapter.)

The energy bottleneck, once considered so critical, has been temporarily eased by the impressive gains in conservation, in addition to double digit growth in oil and coal production for the first half of 1985, following output growth of roughly 9 percent in 1984. (Monthly growth in energy output is shown in Table 3-4, below, to correspond with the monthly industrial output data in Table 3 earlier. For more information, see Chapter 4, Energy.) All signs point to a major output acceleration.

Table 3-4
GROWTH IN MONTHLY ENERGY OUTPUT 1984-1985

	Month	Coal	Crude Oil	Natural Gas	Electricity	Hydro-Power
Growth Rates (Percent)						
1984	Jun	5.9	6.9	-.3	5.6	-2.6
	Jul	11.8	8.3	.7	7.1	7.2
	Aug	8.6	9.4	-5.3	5.9	3.1
	Sep	9.0	10.2	2.5	8.3	3.0
	Oct	10.3	10.6	9.9	6.2	5.2
	Nov	11.2	11.1	4.3	7.6	-9.1
	Dec	10.1	9.5	25.6	7.5	-2.1
1985	Jan	16.6	9.4	5.8	10.4	7.3
	Feb	10.3	9.0	6.1	4.6	-2.8
	Mar	13.7	9.2	6.0	7.6	2.5
	Apr	11.6	12.5	13.9	9.9	14.1
	May	11.0	9.9	6.0	8.4	2.7
	Jun	18.7	11.1	7.8	9.2	6.8
	Jul	11.9	10.6	5.8	8.3	-5.8
	Aug	9.2	7.6	5.5	7.1	5.3
Output*	Aug	69.2	10.6	10.5	338.4	90.8
Output M MTSCE	Aug	49.4	15.1	1.4	4.2	1.1

* Reported as follows: Coal and Oil in million tons, Natural Gas in hundred million cubic meters, Electricity in billion kWh. M MTSCE refers to million Metric Tons of Standard Coal Equivelant.
SOURCES: Official Monthly Statistics. (J5CE03T.D5H)

The potential for growth is particularly significant for light industry. Since December of 1984 light industry has consistently outpaced heavy industry, confirming that official policies to encourage light industrial output are bearing fruit. The major reason for stimulating light manufacturing is to satisfy consumer demand generated by rapidly rising personal incomes. Supply factors also favor more rapid growth in light industrial consumer goods because they are more labor- and less energy-intensive. In a policy statement in early September, the Central Party Committee stressed the goal of reducing the proportion of material inputs and raising labor inputs to 30 percent of final value, suggesting the need for more light industry in total industrial output.

A different production shift, from state- to collectively-owned enterprises, is documented in Table 3-5. The shift comes as a result of the formal transfer of approximately three thousand enterprises from state to collective ownership in 1984 and the implementation of urban management reforms. Over 40 percent growth in the first half of 1985 in the collective and individual enterprise sectors is a clear indication of the growing importance of decentralized management and ownership.

Table 3-5
INDUSTRIAL OUTPUT BY FORM OF OWNERSHIP, 1980-84

	Gross Value of Industrial Output				
	State Owned	Collectively Owned	Village Industry*	Other Forms	Total With Village Industry*
(Percent)					
1980	5.6	18.8	25.1	-	11.0
1981	2.5	9.4	12.2	11.5	4.6
1982	7.1	9.5	9.7	27.7	7.8
1983	9.4	13.5	21.8	33.9	11.1
1984	11.0	21.9	47.5	56.8	15.9
1985 *	14.5	46.7	na	42.9	na
(Bil 1980 Yuan)					
1984	527	166	55	9	757

* NOTE: Village Industry is currently being redefined as part of Industry proper.
SOURCES: Official statistics and RCR calculations. See Statistical Appendix.

In addition to shifting ownership, the urban reforms have introduced the threat of business failures and are promoting new kinds of cooperation across regions and across sectors. The State Economic Commission has issued regulations on "the liquidation and reorganization of companies" to formalize the separation of government and enterprise responsibility. In August, for the first time in the Peoples Republic, three enterprises were declared to be on the brink of bankruptcy. The three plants, all in Liaoning province, have debts exceeding their assets, and were given one year to recover.

The military has become an active participant in civilian industry under the relaxation and reforms. The defense sector is promoting industry both through technology transfer and actual manufacturing of civilian machinery. The weapons industry department has reportedly successfully transformed some production lines into manufacturers of equipment for tannery, cigarette, tea, rubber, and paper-making enterprises. Agreements on the transfer of military technology to civilian uses have increased rapidly from just over 400 items in 1983 to more than 6800 in 1984 and more than 9000 in trade fairs in Peking and Hangzhou alone this year.

Finally, strong and sound growth in investment, as well as the growth and commercialization of agriculture, are sustaining the industrial momentum. Investment in capital construction grew 24 percent in 1984, and over 30 percent in the first half of 1985. The related high growth in both the machine-building and building materials industries is evident in Table 3-6, below. With bank loans and internal funding providing added incentives to monitor investment quality, such very large growth in investment forms one of the most basic sources of sustained industrial growth. The strong growth in agriculture and the freeing up of agricultural workers through the rural reforms is also contributing to the sustained growth in industry. For more details see the chapters on Agriculture, Investment, and Banking and Finance.

Table 3-6
ANNUAL GROWTH OF GVO BY INDUSTRY TYPE 1978-1984
(Percent and Billion Yuan)

	Percentage Growth							Gross Output
Industry	1978	1979	1980	1981	1982	1983	1984	1984
Total	13.48	8.75	8.52	4.13	7.72	10.52	14.04	702.99
Metallurgy	26.98	11.21	4.88	-3.46	6.25	7.92	10.64	57.94
Power	14.20	9.48	6.60	3.03	6.27	6.36	6.98	23.56
Coal & Coke*	13.32	9.70	-3.25	-1.58	5.75	7.23	9.36	18.22
Petroleum	2.86	6.98	1.10	-2.75	2.07	7.68	7.74	33.41
Chemical	23.92	7.02	10.76	4.66	11.43	12.46	12.03	83.03
Machine-building	11.41	7.74	2.31	-3.72	13.44	17.58	21.98	175.71
Building Materials	15.43	8.71	8.49	-.36	14.10	10.27	17.06	28.73
Forestry	10.59	9.48	2.25	-.57	7.01	3.39	9.25	12.68
Food	8.26	9.97	9.50	12.72	9.48	5.13	9.01	86.58
Textiles	14.86	12.09	24.01	18.06	1.27	10.29	13.27	108.29
Clothing	N/A	N/A	N/A	13.90	-3.60	8.12	N/A	N/A
Leather	N/A	N/A	N/A	13.49	-4.97	2.41	N/A	N/A
Paper	13.25	12.00	192.20	5.28	6.37	6.01	13.27	9.22
Other	7.09	5.56	-57.46	-.09	9.52	12.72	N/A	N/A

NOTE *: 1984 includes coal only, growth rate is based on 1983 coal.
Sources: 1978-1980 from World Bank, 1980-1984 from official Chinese sources.
(J5AK17.D5I)

The cumulative result of these trends and reforms is 1985's industrial record. It shows the capacity to support at least 1984's growth record, and possibly more. Sustained industrial growth greater than 20 percent is not unheard of. South Korea maintained industrial growth well above 20 percent for five years in the late 1960s, sustained by exports. For China, the strategy has had to be entirely different, building domestic demand through first rural, then urban reforms, shifting industrial production from state run factories to collective and individual enterprises, and fueling the growth with faster development of energy resources. The industrial record since 1981, as evidenced by the quarterly growth rates in Table 3-2, has shown that the strategy can work. The new energy availability, combined with growing consumer demand, high investment, and, foremost, the management and ownership reforms, are responsible for the remarkable 1985 industrial record, which peaked at 23 percent growth for the first half of the year.

POLICY

Urban reforms, primarily intending to decentralize industrial control, were announced in October of 1984. For industrial enterprises they covered external finances, factory management and power over production. By spring of 1985 in the second phase, Peking was reviewing the slowness of power transfer and moving to ensure that enterprises actually got the power the state intended for them. At the same time, further steps of the reforms continue to be implemented, including wage reforms, price reforms, bankruptcy policy, and quality control plans.

The first phase of industrial reforms covered three areas. First, they called for taxes to continue to take the place of profit delivery. (For details on tax reform, see Chapter 6, Banking and Finance.) Second, factory managers assumed full responsibility, reforming the bonus distribution system and other forms of contract responsibility. Third, departments were streamlined to give more power to enterprises over production, sales, prices, use of funds, personnel affairs and joint ventures. The number of mandatory plan targets under the State Planning Commission has been reduced from 365 to 65.

By May of 1985, 10,000 enterprises nationwide were experimenting with the transfer to factory directors of full responsibility for their enterprises wages, production and finances. The program had achieved some success, although it was not without political problems. It benefited the system of workers' congresses since the directors needed the backing of the workers. But problems, such as clarifying the relationships between factory directors, party committees and workers, and directors who abused their powers for their personal gain, were cited. Nonetheless, although it was still considered an experiment, regions and departments were encouraged to select more enterprises to expand the program.

As of June at least one province, Jiangxi, was promoting a responsibility system in large and medium businesses with the plant director, entrusted by the state, controlling the plant's production and operation. Under this system, the party secretary in the plant is subordinate to the director. At the same time, the province emphasized the need to relax control and insure that enterprises make clear a legal separation from local governments. Obligations to other departments and expenses other than paying taxes were strictly banned.

In mid-spring of this year, it was evident that much of the power the state was ostensibly handing down directly to medium and large enterprises was being intercepted by intermediate levels. The state announced in September that under no circumstances should the intermediate levels be allowed to become another level of government bureaucracy and tried to clearly seperate government and enterprise functions. However, an earlier release from a meeting reviewing reforms in 15 of China's largest cities described the process of insuring the delegation of power to lower levels as likely to become "a battle of storming heavily fortified positions" in separating government functions from enterprise.

The reform process continued with wage reforms in the summer. On July 1, 1985, the state adopted regulations tying wages to economic performance, to provide workers with incentives similar to those already in place in rural areas. The state economic commission announced plans to link wages and bonuses to taxes and profits. However, the tax on wages in state owned industries is sharply progressive, designed to discourage excessive bonuses and wage increases. The tax rate is zero for any increase in wages less than 7 percent over 1984's and thereafter increases rapidly to 100 percent for raises of between 12 and 20 percent. A 300 percent tax is levied on wage hikes over 20 percent.

In late summer two steps were taken to counter additional ongoing problems in industry, the high number of firms with consistent economic losses, and the decline in the quality of industrial output. First, a bankruptcy process for struggling enterprises was introduced. Formerly, they would have been merged with profitable enterprises. The new regulations allow the proper authorities from banking, tax, insurance and auditing departments as well as creditors to dispose of the frozen assets of a bankrupt firm and establish a fund to provide relief for workers laid off due to bankruptcy. Then, in September the State Economic Commission announced plans to oversee about 100 quality inspection centers and quality-test stations to run quality checks on up to 200 major industrial products every three months. However, the fundamental approach to product quality is to rely on technological progress with the underlying assumption that current quality problems will work themselves out naturally as technology improves.

PROBLEMS

The rapid growth in industrial output has increased the incidence of poor quality products, increased the threat of inflation and intensified shortages of raw materials. The shortages have driven up imports of industrial raw materials. Imbalanced growth due to inaccurate price signals and problems with plan discipline have also accompanied the industrial reforms. Losses by state enterprises continue to be a drain on state finances. In addition, the tax burden on some enterprises, especially large state ones, is high.

Low quality products, frequently counterfeits of famous Shanghai brand consumer goods, are increasingly reported. The State Economic Commission reported in August that there has been a marked trend towards product deterioration since the end of last year. The goods cited have ranged from automobiles, bicycles and wristwatches to cigarettes, food and medicine.

Shortages of raw materials and metals have forced conservation policies and large scale imports. Measures to increase rewards for fuel conservation have been experimented with since 1979 and are now being implemented in a wider area. The list of materials has also been lengthened from 10 to 20 to include important industrial materials such as quality steel and cement, soda ash and paper pulp. At the same time imports are easing some of the most acute shortages. In the first quarter of 1985, the machine building industry's output rose 34.4 percent, but the output of iron ore, pig iron, steel and steel products increased only 6 to 13 percent. Iron and steel imports for the first quarter rose over 100 percent. See Trade, Chapter 7, for more data on imports.

Some sectors are still following incorrect price signals, leading to excessive, unbalanced, or inadequate growth. Recurrent shake-outs in various industries are anticipated, as investment mis-judges market potential. The shortage of cotton yarn in Shanghai, a major textile center, illustrates the skewed growth produced by poor price signals. The textile ministry reports that the shortage resulted from rapid increases in post-processing capacity while capacity for the less profitable cotton yarn production remained constant. In addition, more of the cotton produced was being sold to village and township enterprises at higher prices than the Ministry's state enterprises. To deal with shortages, preferential tax treatment will be offered to enterprises producing less profitable products, and the distribution of profits will be readjusted to encourage cotton yarn production. Actual price changes will face continued resistance from state enterprises.

The automobile industry similarly exemplifies the problem of misjudging market potential, over-investment and duplication. The Automobile Industry Corporation of China predicts the need for automobiles by 1990 will be 900,000 but with planned increases, capacity could be more than three times that amount. In the first five months of this year alone, 25 new plants opened, all with output too low to achieve economies of scale. In order to make a profit, enterprises in other sectors have also engaged in vehicle assembly, for which they were ill-suited. The quality of the vehicles from these transformed plants has been very low.

Losses by state-run enterprises continue to be a burden on state finances, despite reforms calling for independent accounting and enterprise responsibility for profits and losses. The national budget for 1985 anticipated losses incurred by state industrial enterprises this year would be 20 percent lower than in 1984. However, by the end of May the losses had increased by 3.6 percent, 1.3 billion yuan over the same period last year. Refer to the Banking and Finance chapter for more on state subsidies to industry.

Crucial industrial goods are still subject to state plans, for which enterprises sign contracts with the state. After they have fulfilled contracts with the state, enterprises can sell their remaining goods in the "free" market or at negotiated prices. However, since the state prices are lower than market ones, contract fulfillment has been low. In one example cited, the Anshan Iron and Steel Company had supplied only 23 percent of their contracted pig iron to the state in the first half of the year. Lack of materials thus threatens and delays state construction projects.

Tax burdens on enterprises are heavy, especially for the large state enterprises which are supposed to be the key to urban reforms. According to Xinhua surveys, roughly 80 to 90 percent of their profits are delivered to the state. Collective enterprises in cities and towns deliver roughly 50 percent, while village industries deliver only 30 percent. Changsha, Hunan, town-run enterprises provided 56.5 percent of county revenues in 1984, despite provincial regulations stating profit delivery should be less than 30 percent. Enterprises have been asked to pay 30 kinds of charges. Enterprises under the coal departments received the most random charges and had their prices forced down by local officials, despite the production and marketing problems coal is facing.

In general, China's real economic resources are of high and improving quality by third world standards. Specific developments in late 1984 and 1985 have greatly enhanced actual output and the demand for that output. The improved welfare could provide a cushion to help this year's much needed price reforms. However, the balance between growth in income and output is precarious and the risk of inflation is a political liability for Deng's programs.

PROSPECTS

Some moderation in the rapid overall industrial growth is anticipated. At 20 percent growth, industrial output would double in well less than four years. But sustained growth at 20 percent is highly unlikely, straining as it would so many required input supplies, especially those for management and skilled labor. In fact, the growth rate has already come down since midyear, with August's industrial output up 17.4 percent, and the third quarter's up 19.5 overall. But even if growth settles at some much lower rate, say 15 percent, China's economy will quickly find itself transformed, with industrial output in 1995 as much as four times what it is today.

The draft five-year plan for 1986-1990 has called for a gradual cooling of in its first two years. This is perceived as preferable to a sudden slow-down in late 1985. In fact, China's officials have a poor record of fine-tuning the economy, and efforts, however gradual, to slow the economy in late 1985 and 1986 will probably have a greater-than-intended effect. Output growth in 1986 is most likely to fall close to 10 percent, which is still very high growth by international standards.

The structure of industrial output is expected to shift substantially towards more labor-intensive branches. Collective industry has been growing faster than state industries, but rural industry is outpacing both of them. See Table 3-5. In rapidly growing Jiangsu province, 40 percent of the rural labor force is engaged in industry. Light Industry Minister, Yang Bo said the Seventh Five Year Plan will stress light industry. Although light industry development has been rapid, consumer tastes and purchasing power have changed and increased faster. Priority will be given to higher quality and brand name consumer goods. With the bulk of light industrial goods being produced by small and medium plants, there is large need of technological transformation. Mostly enterprises will have to rely on their own or foreign funds to upgrade and renovate.

The shifts in value and ownership of industrial output from state to collective and other forms which are so evident in Table 3-5 is expected to continue.

Official targets for the next five years call for 7 percent growth, increased emphasis on developing rural industry and on technical renovation and continued reforms in urban enterprises. Village industry is suppposed to absorb surplus agricultural workers as well as provide goods to the peasants at their increasing income levels and should be self-financed. Other industrial development is to be focused on technical transformation of existing facilities and continued management reforms, both of which should increase efficiency and improve the quality of output. The machine building and electronics industries are targeted to undergo transformation first since they supply other branches of industry.

STATISTICAL APPENDIX: INDUSTRY OUTPUT AND GROWTH

(Item)	(Units)	1980	1981	1982	1983	1984	1985 I-II
Coal							
	(million tons)	620	622	666	715	789	414
	(% growth)	-2.4	.3	7.1	7.4	10.4	11.8
Crude Oil							
	(million tons)	106	101	102	106	115	61
	(% growth)	-.2	-4.5	.9	3.9	8.1	10.9
Natural Gas							
	(billion cubic meters)	14.3	12.7	11.9	12.2	12.4	6.4
	(% growth)	-1.7	-10.7	-6.4	2.3	1.8	7.9
Electrical Power							
	(billion kWh)	301	309	328	351	377	199
	(% growth)	6.6	2.9	5.9	7.2	7.3	9.1
of which:Hydropower							
	(billion kWh)	58.2	65.5	74.4	86.4	86.8	42.5
	(% growth)	16.2	12.5	13.6	16.1	.5	7.4
Pig iron							
	(million tons)	38	34	36	37	40	21
	(% growth)	3.5	-10.1	3.9	5.3	7.0	6.3
Steel							
	(million tons)	37	36	37	40	43	23
	(% growth)	7.7	-4.1	4.4	7.7	8.6	7.3
Rolled Steel							
	(million tons)	27	27	29	31	34	18
	(% growth)	8.8	-1.7	8.7	5.9	9.8	10.6
Cement							
	(million tons)	80	83	95	108	123	67
	(% growth)	8.1	3.8	14.8	13.7	13.6	18.4
Plate glass							
	(million cases)	28	31	35	42	48	27
	(% growth)	18.9	10.6	15.7	17.5	15.9	22.9
Caustic soda							
	(million tons)	1.92	1.92	2.07	2.12	2.22	1.16
	(% growth)	5.3	.0	7.8	2.4	4.7	5.4
Total Chemical fertilizer							
	(million tons)	12.32	12.39	12.78	13.79	14.60	7.47
	(% growth)	15.6	.6	3.2	7.9	5.9	.6
Chemical pesticides							
	(thousand tons)	537	484	457	331	299	136
	(% growth)	.0	-9.9	-5.6	-27.6	-9.7	-25.5
Plastics							
	(million tons)	.90	.92	1.00	1.12	1.18	.60
	(% growth)	13.2	2.0	9.5	11.8	5.3	3.8
Mining equipment							
	(thousand tons)	163	115	158	202	258	156
	(% growth)	-38.4	-29.3	37.7	27.4	28.0	41.4
Metal Cutting Machine tools							
	(thousands)	134	103	100	121	134	78
	(% growth)	-4.3	-23.2	-2.7	21.2	10.3	22.4
Automobiles							
	(thousands)	222	176	196	240	316	225
	(% growth)	19.7	-21.0	11.8	22.2	31.9	58.8

(Item)	(Units)	1980	1981	1982	1983	1984	1985 I-II
Tractors							
	(thousands)	98	53	40	37	40	26
	(% growth)	-22.2	-46.0	-23.7	-8.2	7.3	20.1
Locomotives							
	(units)	512	398	486	589	658	393
	(% growth)	-10.6	-22.3	22.1	21.2	11.7	19.1
Cotton Yarn							
	(million tons)	2.9	3.2	3.4	3.3	3.2	1.7
	(% growth)	11.0	8.3	5.8	-2.5	-1.6	5.3
Total Cloth							
	(billion meters)	13.5	14.3	15.4	14.9	13.7	6.9
	(% growth)	10.9	5.9	7.6	-3.1	-7.9	.3
Chemical Fibers							
	(thousand tons)	450	527	517	541	735	459
	(% growth)	38.0	17.1	-2.0	4.6	35.9	34.1
Woolen Fabric							
	(million meters)	101	113	127	143	180	105
	(% growth)	12.0	12.0	12.0	12.8	26.3	30.1
Paper							
	(million tons)	5.4	5.4	5.9	6.6	7.6	4.0
	(% growth)	8.5	.9	9.1	12.2	14.4	18.2
Beer							
	(million tons)	.7	.9	1.2	1.6	2.2	1.4
	(% growth)	32.7	31.9	28.6	39.3	37.4	43.9
Cigarettes							
	(million cases)	15.2	17.0	18.9	19.4	21.3	11.1
	(% growth)	16.7	12.1	10.6	2.8	10.0	18.6
Bicycles							
	(millions)	13.0	17.5	24.2	27.6	28.6	15.6
	(% growth)	29.0	34.7	37.9	14.0	3.7	13.0
Sewing Machines							
	(millions)	7.7	10.4	12.9	10.9	9.3	4.7
	(% growth)	30.8	35.3	23.8	-15.5	-14.0	-1.8
Total Television Sets							
	(thousand sets)	2,492	5,394	5,920	6,840	10,038	7,979
	(% growth)	87.6	116.5	9.8	15.5	46.8	84.5
Color Television Sets							
	(thousand sets)			288	531	1,340	1,623
	(% growth)				84.3	152.2	240.0
Cameras							
	(thousands)	372.8	623.0	742.3	925.6	1,261.8	783.4
	(% growth)	56.6	67.1	19.1	24.7	36.3	42.6
Household Washing Machines							
	(thousands)	245	1,281	2,533	3,659	5,781	4,117
	(% growth)	1,261.1	422.9	97.7	44.5	58.0	70.0
Refrigerators							
	(thousands)			99.9	188.5	547.4	565.5
	(% growth)				88.7	190.4	220.0

SOURCES: State Statistical Bureau, "Yearbook of China 1984", and "Communique", March, 1985, China Economic News, July 22, 1985. (J5CE01T.D5H, J5CE02T.D5H)

CHAPTER FOUR - Energy

EXECUTIVE SUMMARY

TRENDS
- * Chinese energy output since 1981 has averaged an impressive 8 percent growth a year, without significant offshore oil finds.
- * Very rapid increases in crude oil exports in 1984-85 have been in part the result of domestic conversion from oil to coal.
- * Sustained energy conservation in industry, together with output growth, have for now eased the once-critical energy bottleneck.

POLICY
- * State investment has given energy the highest priority.
- * Coal reforms are allowing new price and market flexibilities.
- * New output is being sought onshore near east-coast cities.

PROBLEMS
- * Energy's biggest problems are its low relative pricing, low level of technical sophistication, and geographic isolation.

PROSPECTS
- * China's plan to double energy output by 2000 is conservative.
- * The best prospects for foreign participation are in coal and onshore oil.

TRENDS

The most significant trends in China's energy sectors have been the rapid and sustained increases in energy output since 1981, the strong role being played by energy conservation in further easing the energy bottleneck, and China's conterted efforts to maintain and increase foreign exchange earnings from crude oil exports in the face of rapidly declining world oil prices.

Table 4-1
PRIMARY ENERGY OUTPUT, 1975-85

	COAL	CRUDE OIL	NATURAL GAS	HYDRO-POWER	TOTAL
		(Percent Growth)			
1975	16.7	18.8	17.5	15.0	17.2
1976	.2	13.1	14.1	-4.2	3.5
1977	13.9	7.4	20.0	4.4	12.3
1978	12.4	11.1	13.3	-6.3	11.9
1979	2.8	2.0	5.7	12.3	2.7
1980	-2.4	-.2	-1.7	16.2	-1.6
1981	.3	-4.5	-10.7	12.5	-1.1
1982	7.2	.9	-6.3	13.6	5.4
1983	7.2	3.9	2.3	16.1	6.5
1984	10.3	8.1	1.8	.5	9.5
1985*	11.8	10.9	7.9	7.4	11.5
		(Million Tons Standard Coal Equivalent)			
1984	563.35	163.89	16.53	10.63	754.40

* NOTE: 1985 figures for first six months only.
SOURCES: Officially released data. (J5AF30)

After **slow growth and stagnation in 1980-81** and recovery in 1982, China's energy output has grown at an average annual rate of over 10 percent from 1983 through the first six months of 1985, showing that at least for now, **energy is no longer the constraint on China's economic growth** it was thought to be a few years ago. China's respectable recovery in energy output after the 1980-81 recession is shown clearly in Table 4-1, above, which gives growth rates for major primary energy sources. The bottom row gives physical output levels for 1984, illustrating how coal dominates China's energy sector, providing three times more primary fuel than oil. Together, coal and oil account for almost all (96 percent in 1984) of China's energy output.

Both **coal and oil** have **recovered strongly** from the 1980-81 recession. Coal's growth performance has been sustained since 1982, the first year of recovery, with output **growing at double-digit rates** since 1982. Overall **1985 coal output will certainly exceed the original official 790 million ton target,** probably by as much as another 100 million. Oil output recovered in 1983, and has since enjoyed sustained, rapid growth, with output growing 10.9 percent in the first six months of 1985.

The **1980-81 recession**, rather than a planned slowdown for "readjustment," as often depicted by Chinese officials, was a **reaction to severe budget cuts** after the 1979 Vietnam fighting, sharply increased food subsidies, and excessive investment spending during the 1977-78 "mini-Great Leap." These budget cuts affected the subsidies on which the energy industry, and in particular coal, because of its low pricing, so heavily depends. In addition, 1981 investment levels fell dramatically, as illustrated in Table 4-2 below. This is especially true for the coal industry, where state investment fell by over 30 percent in 1981, and the oil industry, where investment fell by 16.3 percent.

Table 4-2
State Capital Construction in Energy, 1978-84
(million Yuan)

	Coal Industry	Oil Industry	Power Industry	Total Energy*
1978	3,180	3,112	5,091	11,470
1979	3,186	2,707	5,099	11,098
1980	3,347	3,338	4,814	11,565
1981	2,315	2,795	4,014	9,464
1982	2,985	2,530	4,623	10,223
1983	4,007	2,902	5,746	12,760
1984	--	--	--	16,596

* NOTE: Total includes coking industry.
SOURCES: Official State Statistical Bureau data.

As Table 4-2 illustrates, **investment levels recovered** in 1983, and have grown rapidly since then, increasing by over 30 percent in 1984. Preliminary data show that this strong growth has continued into 1985, with energy investment for the first six months 30.7 percent higher than in 1984. This recovery and subsequent strong growth in investment points to continued ouput gains for both coal and petroleum.

China's **strong energy output performance**, confirmed by output figures for 1984 and the first six months of 1985, has come **without major successes in offshore exploration** or completion of the large-scale coal mining operations planned for later in the decade. Offshore drilling has yielded disappointing results, and the highly visible Chinese-foreign ventures for coal extraction are not yet on line. For oil, the growth has come from existing fields, and new onshore oil discoveries. For coal, the growth has come from small local mines.

For both coal and oil, output **growth** can be interpreted as resulting **from decentralized management** of mines and wells. This is shown clearly for coal in Table 4-3, below, where output for state owned mines has grown 2.4 percent in the five years since 1979, while output from local mines has grown 6.9 percent--almost three times as fast.

Table 4-3
HISTORICAL OUTPUT OF COAL BY OWNERSHIP TYPE

	1979	1980	1981	1982	1983	1984	1985**
Total Output (mn tons)	636	620	622	666	715	789	790
State Mines	358	344	335	350	382	402*	390
Local Mines	278	276	287	316	333	387	400
Share of Total (percent)							
State Mines	56.3	55.5	53.9	52.5	53.5	51.0	49.4
Local Mines	43.7	44.5	46.1	47.5	46.5	49.0	50.6

NOTES: *Preliminary 1984 breakdown, see FBIS, November 27, 1984 page K22.
**1985 figures represent State targets, not actual output.
SOURCES: Official data and press releases.

Official growth targets show that the **share of output from local mines is to rise further** in 1985, from 49 to 51 percent of total output. In fact, output from local mines is growing much faster than planned. Data for the first half of 1985 indicate that local coal production is growing at over 19 percent, while output from state mines is growing at 4.6 percent. This national trend is complemented by regional developments. For example, in Henan province, China's second largest coal producer (after Shanxi), first quarter 1985 ouput from small rural mines was twice that of the first quarter in 1984, while output from state mines lagged far behind.

Equally as important as the increased level of output have been the rapid **strides** made by the Chinese **in energy conservation**. Since the mid-1970s, China has controlled domestic energy consumption, causing it to grow more slowly than output and allowing a larger and larger surplus to be either exported or added to inventories. Only in 1980 was the sudden slump in output not matched by an equivalent fall in consumption. Although data on consumption or change in inventories for the first half of 1985 are not yet available, there is evidence that energy consumption restraint has continued. A study from Shanghai, China's major industrial center, reported that, of the energy consumed to raise output in the first five months of 1985, 80 percent came from energy conservation, while only 20 percent of the growth in output was fueled by new energy supplies. Table 4-4 below illustrates this energy conservation since 1978 by showing the increase in consumption to be slower than the increase in output.

Table 4-4
ENERGY SUPPLY AND DEMAND IN CHINA, 1970-1984
(Million Tons Standard Coal Equivalent)

	COAL			CRUDE OIL			TOTAL ENERGY		
YEAR	Production	Consumption	Stock Changes and Net Exports	Production	Consumption	Stock Changes and Net Exports	Production	Consumption	Stock Changes and Net Exports
1970	252.8	236.9	15.8	43.8	43.0	.9	302.9	285.3	17.6
1971	279.9	273.2	6.7	56.4	55.2	1.2	344.3	336.4	7.9
1972	292.7	288.9	3.8	65.3	64.0	1.3	368.0	362.9	5.1
1973	297.7	292.7	5.0	76.7	72.7	4.0	387.1	378.1	9.0
1974	294.9	289.6	5.3	92.7	83.2	9.6	402.7	387.9	14.9
1975	344.1	326.4	17.8	110.2	95.7	14.5	472.0	439.1	32.8
1976	344.9	333.0	11.9	124.6	110.0	14.6	488.5	462.0	26.6
1977	392.7	367.8	24.9	133.9	118.4	15.5	548.6	508.1	40.5
1978	441.3	403.8	37.4	148.8	129.9	18.9	613.8	557.5	56.3
1979	453.4	417.8	35.6	151.8	127.7	24.1	630.6	570.9	59.8
1980	442.7	432.8	9.9	151.5	126.9	24.6	620.3	585.8	34.6
1981	443.8	432.4	11.4	144.7	118.4	26.3	613.6	575.9	37.7
1982	475.8	457.8	17.9	146.0	115.6	30.4	646.8	600.3	46.5
1983	510.2	483.9	26.3	151.7	121.8	29.8	688.7	632.7	56.0
1984	563.4	531.3	32.0	163.9	124.9	39.0	754.4	683.5	70.9

NOTE: Natural gas and hydroelectric production and use are included in the total.
SOURCES: Official statistics and RCR calculations (J5AF35).

The **large increase in petroleum exports** for the first half of 1985 is further evidence of conservation gains. Crude oil export volume grew by 41.7 percent over the first half of 1984, far outstripping growth in output of 10.9 percent. **Coal exports**, however, **fell by 2.4 percent** in the same period, whereas output grew by 11.8 percent. This discrepancy may indicate success in conserving oil and in the campaign to convert energy users from petroleum to coal, largely so petroleum exports can be increased in the face of falling prices.

Table 4-5
ECONOMY-WIDE ENERGY SAVINGS, 1979-84

	Overall Economic Growth	Energy Consumption	Energy Use per Unit Output
	(percent growth)		
1979	7.0	2.4	-4.3
1980	6.4	2.6	-3.6
1981	4.9	-1.7	-6.3
1982	8.3	4.2	-3.8
1983	9.8	5.4	-4.0
1984	13.9	8.0	-5.1

SOURCES: Official statistics and RCR calculations (J5CBE14t.r5j).

Table 4-5, above, compares overall economic growth with consumption of energy and shows the very large sustained gains through energy conservation. As Chinese officials have pointed out, a **portion of recent energy savings** is **due to changes in the economic structure.** In part, this is due to a shift from heavy industry, a major consumer of energy, to light industry, where output value is higher per unit of energy input. However, this shift should not be overemphasized, since heavy industry still represents half of industrial output. Within heavy industry, less efficient plants have been shut down. In both industry and agriculture, emphasis is shifting to higher value-added products, with correspondingly lower energy input per unit of output value.

China can achieve these energy savings because her overall use of energy is so **inefficient by world standards.** Table 4-6 below illustrates China's highly inefficient use of energy, and in particular the inefficient use of coal, the energy source on which Chinese industry is most dependent.

Table 4-6
INTERNATIONAL ENERGY CONSUMPTION COMPARISONS, 1981

	Per Capita GNP (US $)	Per Capita Energy (Kg Coal)	Per Capita Coal (Kg)	Per Capita Thermal Power (Kwh)	Thermal-Coal Ratio (x1000)	Energy Per GNP $ (Gram)	Coal Per GNP $ (gram)
United States	13,160	11,626	2,515	7.94	3.2	883	191
Brazil	2,240	1,101	66	.10	1.5	492	30
China	310	618	436	.12	.3	1994	1406
India	260	210	128	.11	.9	808	490
Japan	10,080	4,649	791	3.43	4.3	461	78
Korea, South	1,910	1,563	669	.98	1.5	818	350
Germany, West	12,460	6,053	2,011	4.81	2.4	486	161
Poland	5,635	5,799	3,872	3.12	.8	1029	687
U.S.S.R	6,619	6,422	1,870	2.12	1.1	970	282

NOTE: Per capita Energy and Energy per GNP $ are measured in terms of standard coal units (7000 kcal/ton).

SOURCES: Various World Bank and U.N. publications, and other sources. For details contact Rock Creek Research.

Data in Table 4-6, above, on energy and coal requirements per unit of GNP show how inefficiently China uses what energy resources she has. **Japan**, the most efficient energy user, **produces more than four times as much with each unit of energy input.** For coal, China uses more than twice as much coal per GNP dollar as Poland, the next most inefficient user. Poland is almost as reliant upon coal as China. It is also interesting to see in Table 4-6 how little of China's coal is used to generate thermal electricity, reflecting both inefficient generation and large-scale direct use of coal for industrial purposes.

Electric power output growth in China has averaged 7 percent a year since 1978, in spite of very uneven performance for hydroelectricity. Patterns of thermal power generation and shortage confirm the inefficient use of energy in general and the critical need for power generating and transmission capacity. In spite of **consistent growth** in electrical power generation over the last ten years (see Table 4-7 below), China's power **supply can still not meet demand.** Chinese officials consistently cite surveys which show that 30 percent of industrial capacity is idle at any given time because of electric power shortages.

In addition to using little of its coal to generate electricity, China **generates thermal power inefficiently.** China is about half as efficient as some advanced countries in this field, and its efficiency is expected to improve as much as 40-50 percent by the end of the century.

Table 4-7
ELECTRIC POWER GENERATION, 1975-85

	Thermal Power	Hydro-Power	Total
	(percent growth rates)		
1975	16.3	15.0	16.0
1976	6.3	-4.2	3.7
1977	11.6	4.4	10.0
1978	20.6	-6.3	14.9
1979	9.4	12.3	9.9
1980	4.5	16.2	6.6
1981	.6	12.5	2.9
1982	3.9	13.6	5.9
1983	4.6	16.1	7.2
1984	9.5	.5	7.3
1985*	9.6	7.4	9.1
	(billion kilowatt-hours)		
1984	290.2	86.8	377.0

Sources: Official Chinese data (J5CBE11t.R5J).
*NOTE: 1985 growth rate is for first six months only.

Hydropower accounts for a **significant portion** (22.9 percent in 1984) of China's **electric power generation**, but has grown more slowly than thermal power in recent years. Growth in hydropower generation was rapid through 1983, but slowed to .5 percent in 1984, followed by growth of 7.4 percent for the first six months of 1985. So far, this represents a poor recovery from the 1984 slowdown.

The **1984 slowdown** in hydropower output is partially **due to irregular rainfall patterns** in many parts of the country, including serious drought in parts of North China, making analysis of overall trends difficult. Additionally, investment in hydropower has grown much more slowly than investment in thermal plants in recent years (20.1 percent from 1980 to 1983, as opposed to 31.4 percent for thermal), while investment in transmission facilities is growing at an even slower rate (3.2 percent from 1980 to 1983).

POLICY AND REFORMS

Increasing energy output and **rationalizing consumption** patterns have been given high priority through both direct and indirect government steps. Direct measures have centered around investment allocations and a well-developed price reform program, especially in the coal industry. Indirect measures include the general urban industrial reforms. These general reforms have substituted net earnings incentives for physical output targets, prompting energy conservation even in advance of price reforms.

Energy has been given continued **high priority in State investment.** Investment in the energy industry reached 6.6 billion yuan in the first half of 1985, 30.7 percent higher than in the same period of 1984. Investment in energy continues to make up the bulk of state capital construction in industry, 49 percent in 1984, but down slightly for the first half of 1985 to 45.1 percent.

In the **coal industry**, a combination of **price and management reforms** is being introduced to rationalize supply and consumption through market forces. The reforms have already brought out dislocation problems which will have to be solved not only for coal, but for the economy as a whole if the use of financial incentives is to succeed.

Price reform has **dramatically altered** the **way coal is distributed** and consumed. Just as for earlier reforms in agriculture, coal industry reforms were first experimented with at select coal mines. In 1983, a trial program was introduced in 22 mining administrations in China's eastern region to allow higher prices for coal production in excess of quotas. In addition, mines were allowed to sell above-quota coal to whomever they wished. Individual end-users, both state and local, were charged higher prices for deliveries over their standard orders. The ingenuity of the system is in its influence over decisions at the margin. It affects decisions about additonal output and increased consumption without ruining the financial positions of subsidized state enterprises.

As part of the price reform program, **wider variations in coal prices** will be implemented to reflect different grades of coal. Industrial users are already beginning to pay higher prices. According to official announcements, the price of coal is being raised to encourage conservation and more efficient use. Thus, goes the official argument, higher coal prices should not result in higher prices for final products. The price of coal for household consumption is expected to remain stable, due to continued government subsidies meant to cushion politically unstable urban areas from the impact of price reform on living standards.

The **management aspects** of the experimental reforms include **greater freedom given to coal mines,** power companies, chemical plants, and other end-users to form joint ventures and compensatory ventures to coordinate production, transportation, and marketing. By late 1984, however, problems developed in supplying standing-order customers. It seems that the profit incentive and the return on new cooperative ventures caused coal to be diverted from traditional customers with standing orders to affiliates and other customers willing to pay higher prices.

A further policy initiative in the coal industry is aimed at dealing with the **isolation problem.** Since most of China's coal is in Shanxi and the west, transport was seen as the only answer to the energy shortage on the east coast. By mid-1985, the Coal Ministry had begun giving high priority to developing coal reserves in eastern China, with 21.7 percent of state mine development investments in 1985 allocated for that region. Coal reserves in east China are mostly in Shandong and Anhui provinces and are estimated by the Chinese at over 44 billion tons (5.9 percent of total Chinese reserves), not as plentiful as in western China, but of good quality.

In the **petroleum industry,** just as for coal, policy has focused on **increasing output** and **rationalizing use.** For petroleum, this has meant shifting discovery and development efforts to **onshore fields,** both new and existing. Offshore, although there have been a few good finds, the results have been disappointing enough to make negotiations on a second set of drilling contracts more difficult for the Chinese. Rationalization of petroleum use, in addition to more traditional conservation efforts, has emphasized conversion of oil-burning facilities to coal-burning ones, primarily to make petroleum available for export.

One measure of the direct effort to produce more oil onshore is the emphasis on investment in **technical updating and transformation** in the petroleum industry. The oil industry received 15 percent of all such investment allocations in the early 1980's, more than double the level of technical transformation investment in the coal industry. From 1981 to 1983, technical transformation investment in oil grew at over 35 percent a year, much faster than for other industrial sectors.

Within China, the government has sought to **restrain domestic use** oil in order to increase the amount available for export. In addition to encouraging consumption restraint, the government has pursued a policy designed to switch power generation and other industrial uses from oil to coal-fired boilers. The success of this policy is indicated by the relatively small increase (2.5 percent in 1984) in oil consumption, as compared to growth in oil output of 8.1 percent in the same year, and growth in coal consumption of 9.8 percent. As illustrated in Table 4-4, most of the increase in stocks and net energy exports for 1984 is from oil consumption restraint. This trend has continued through the first half of 1985, with crude oil export volume growing by 41.7 percent, far outstripping output growth of 10.9 percent. According to the ministry responsible for petroleum exports, the China Nationa. Chemicals Import-Export Corporation, China is willing to restrain domestic oil consumption even more in order to increase exports, if markets can be found.

The policy of **conversion from oil to coal** wherever possible and of rapidly increasing petroleum exports has been necessary to compensate for rapidly weakening world oil prices. Table 4-8, below, shows the fall in petroleum prices China received from 1981 to 1985, and the compensating increases in exports to maintain earnings. The slow increase in export volume in 1982-83, as prices began to soften, caused foreign exchange earnings to stagnate and then decline, before recovering in 1984 and 1985 with a surge in export volume.

Table 4-8, below, gives growth rates (except for the top and bottom rows) for petroleum export volume, value, and average price. Exports are given for both crude and refined products. Most noticeable is the sharp average price decline for crude in 1983 and China's very strong volume export response in

1984. Detailed trade data show that a significant portion of this petroleum export was targeted for Japan, with which China seems to have a value barter agreement, swapping oil for steel. With falling world prices, China may have had difficulty keeping its deliveries up to the agreed-upon amount. For more detail, see Chapter 7 on Trade and Payments.

Table 4-8
CHINESE OIL EXPORTS, 1981-85

	Volume			Dollar Value			Price Change	
	Crude Pet-roleum	Refined Pet-roleum	Total Oil	Crude Pet-roleum	Refined Pet-roleum	Total Oil	Crude Pet-roleum	Refined Pet-roleum
1981 Level**	13,870	4,670	18,540	3,268	1,376	4,644	236	295
	(percent	growth)						
1982 I	28.4	35.9	30.3	21.8	30.9	24.5	-5.1	-3.8
II	15.1	4.6	12.6	9.9	-.1	7.0	-4.7	-4.5
III	-3.8	-13.0	-6.2	-11.0	-15.9	-12.5	-7.3	-3.1
IV	-7.4	3.1	-4.8	-13.4	-.6	-9.7	-6.2	-3.6
Average	**5.8**	**5.1**	**5.7**	**-.4**	**1.2**	**.1**	**-5.9**	**-3.7**
1983 I	-9.4	-9.6	-9.5	-17.0	-14.3	-16.2	-8.1	-5.0
II	-11.9	15.8	-5.6	-24.4	9.2	-15.4	-14.0	-5.8
III	22.8	6.7	18.9	10.4	8.1	9.7	-10.2	1.4
IV	1.6	-10.6	-1.6	-13.2	-21.5	-15.8	-14.6	-12.3
Average	**1.0**	**.0**	**.7**	**-11.2**	**-5.5**	**-9.5**	**-12.2**	**-5.6**
1984 I	35.2	13.3	29.3	25.0	3.7	18.1	-7.8	-8.6
II	63.5	13.6	49.6	58.1	6.3	40.2	-3.7	-6.1
III	22.2	21.1	22.0	12.6	3.3	9.9	-7.7	-14.7
IV	77.6	16.1	62.7	62.3	-1.4	43.3	-8.8	-14.8
Average	**48.5**	**16.1**	**40.4**	**37.8**	**3.1**	**27.0**	**-7.2**	**-11.2**
1985 I	56.1	18.0	47.1	50.5	10.5	39.1	-3.7	-6.1
II	31.0	-.2	24.4	25.3	-5.8	17.2	-4.3	-5.7
Average*	**41.7**	**8.2**	**34.3**	**36.2**	**1.7**	**26.8**	**-1.1**	**-3.4**
1984 Level**	22,010	5,700	27,710	3,984	1,356	5,340	181	238

SOURCE: Chinese Customs Statistics. (J5CBE17t.R5J)
NOTES: *1985 average growth for the first half only. Change in price for 1985 first half is relative to the 1984 average.
**Levels for 1981 & 1984 are in 1,000 tons for volume, million dollars for value, and dollars per ton for unit value.

PROBLEMS

In spite of rapid growth in recent years and good prospects for energy output growth in the near future, China's most serious energy problems remain: the **low level technical sophistication** in primary production and secondary conversion of energy, extreme **isolation** of many of the best energy fields from major consumers in industrial centers, **chronic shortage** in both urban and rural areas, and serious **weakening** in the **international oil market** on which China counts for a significant share of her foreign exchange earnings.

The **low level of technical sophistication** will be perhaps the most difficult for China to overcome without large expenditures of foreign exchange for **design, equipment, and training from Japan and the West.** The problem is most obvious and celebrated in the case of nuclear energy, but given the overwhelming importance of coal and petroleum in China's energy plans, the low technical level in these sectors is more critical. The coal and oil industries must modernize all aspects of energy extraction and conversion, not only to increase output, but also to improve health and safety conditions, which are particularly poor in China's many local mines.

Although energy output is growing most rapidly where demand for energy is highest, China's industrialization could proceed much faster and more economically if energy **transport and transmission growth** were as impressive as gains in output. Energy production in China's southern regions is very poor relative to needs, while the situation is just the reverse in the isolated North and Northwest. Roughly two-thirds of end-1984's 780 billion tons of proven reserves are in provinces in the north and northeast. High quality coal reserves are isolated, and transportation systems have been slow to develop.

For oil, the natural shortage of petroleum in the south and east accentuates regional disparities in total commercial energy availability. Although coal can be used in some applications in place of petroleum products, it is not as convenient as oil, and in many applications, substitution of coal is not possible. For hydro-electric power, regional differences are just as marked, with very little hydropower generated in the north and on the east coast, where industrial needs are the greatest.

Shortages in major cities and some rural areas continue to be a major problem for the energy sector in spite of recent rapid growth in energy output. According to recent reports, commercial energy supply in rural areas meets only 50-60 percent of demand. Given short supplies of commercial energy sources, rural dwellers resort to straw, firewood, and other natural sources for most (69 percent) of their energy needs. Commercial sources satisfy about a quarter of energy needs. (The corresponding figure for small towns is 43 percent.)

The **electric power shortage** is especially critical in urban areas. According to Chinese survey results, 30 percent of industrial capacity goes unused at any given time because of electric power shortages and sharing procedures. Sections of cities go without power on a regularly scheduled basis. Large scale projects, such as the Baoshan steel complex, have had to be delayed or scaled back due to insufficient power supply capability.

For Chinese energy exports, **low world energy prices** remain the biggest problem, affecting foreign earnings and direct foreign investment. For exports of onshore oil, low world oil prices mostly affect the Northeast, China's main source of crude for export. For regions without oil or access to the foreign exchange it earns, lower world oil prices might actually stimulate economic growth, as imports of refined petroleum products increase.

For development of the offshore oil industry, the world oil glut weakens

China's bargaining position vis a vis multinational oil companies, forcing China to relax terms. The drop in world coal prices from a high of $50 in 1982 to the present level of $40 a ton has detracted from investors' interest, although **China could profit from lower equipment prices.**

PROSPECTS

While **prospects** for China's energy output growth and energy conservation are **good** in the short and intermediate future, unsophisticated technology could reduce the long-term potential for output growth and increased efficiency in conservation and use. The well-known Chinese goal of **doubling 1980 energy output by the year 2000** is feasible, and possibly **conservative,** but will require the added productivity of Japanese and Western technologies. The extreme inefficiency of energy use illustrated in Table 4-6 shows great potential for savings. However, consumption savings will have to be close to 7 percent a year if output is to quadruple during the same 20-year period, as planned.

Table 4-9
ENERGY OUTPUT AND GROWTH TARGETS, 1980-2000

	Coal	Crude Oil	Natural Gas	Electricity
(historical growth rates)				
1980	-2.4	-.2	-1.7	6.6
1981	.3	-4.5	-10.7	2.9
1982	7.2	.9	-6.3	6.0
1983	7.2	3.9	2.3	7.2
1984	10.4	8.1	1.8	7.3
1985*	11.8	10.9	7.9	9.1
(target growth rates)				
- 1990	4.0	4.6	--	6.5
- 2000	2.2	3.5	5.2	8.1
(physical output)				
1984 Level **	789	115	12	377
2000 Target**	1,200	210	30	1,200

SOURCE: Official data and projections (J5C003s.R5J).
NOTES: *Output growth in 1985 is for the first six months only. Growth rates shown for 1990 and 2000 are the annual rates required to meet official targets, based on 1984 output levels.
**Physical output for 1984 and 2000 is in million tons for coal and oil, billion cubic meters for gas, and billion kilowatt-hours for electric power.

The **strong growth in energy output** since recovery from the 1980-81 recession is shown again in Table 4-9, above, in comparison to the growth rates required to meet **Chinese energy output targets** for 1990 and the year 2000. For coal and oil, historic growth rates have been significantly higher than the annual growth of 4.0 percent for coal and 4.6 percent for oil required to reach the 1990 target (one billion tons of coal and 200 million tons of oil). If 1985's rapid energy growth is added to the calculation, the annual growth rate required to reach 1990 targets drops to about 2.5 percent for coal and 3.5 percent for oil.

China's long-term goal of **doubling coal output** to 1.2 billion tons by the year 2000 is **therefore conservative**, given present growth rates, investment levels, and China's rich reserves. China produced 620 million tons of coal in 1980. To double that amount by the year 2000 would have required growth of 3.5 percent a year. Since actual growth has averaged 7.3 percent per annum from 1980 to mid-1985, doubling by 2000 will require annual growth of only 2.4 percent for the next fifteen years.

The combination of China's **high absorptive capacity** for technology transfer and her on-going **managerial and incentive reforms** are the main reasons for general optimism in the face of current energy shortages. This optimism represents a shift from generally held views on China's energy situation in 1980-81.

Short-term efforts to increase coal production will center on continued exploitation by the small, **local mines** which have been responsible for much of the recent growth in output. **Long-term growth** will come from large-scale open pit mines, to be exploited with **foreign technological assistance.** One example is the Occidental-Pingshuo coal joint venture agreement, completion of which augurs well for China's long term prospects of expanding coal production. The mine is to go into full operation in September 1987, with projected annual capacity of 15.3 million tons.

With only **spotty offshore drilling results**, foreign oil companies will press for both better terms and greater access to onshore oil. The Chinese are more likely to grant such access, now that prospects for using offshore oil funds to pay for onshore exploitation have dimmed. Several foreign companies are already engaged in onshore surveying, but on a service contract basis, with eventual production sharing unlikely. Experts say the Chinese are most likely to initially offer only high-risk ventures the possibility of production sharing.

China has better prospects for expansion of the **onshore oil industry**. As with coal, the Chinese object of **doubling output by the year 2000** to 200 million tons per year is probably **conservative.** Output in 1984 was 115 million tons. With output in the first six months of 1985 already 10.1 percent higher than in the first half of 1984, doubling by 2000 requires an annual growth rate of less than 4.0 percent. This should be possible with even poor offshore oil results.

The Chinese plan to quadruple **electric power generation** to 1.2 trillion kilowatt-hours by the year 2000, from 300 million kwh in 1980. By 1990, power output is to reach 550 million kilowatt-hours.

To achieve these levels of power generation will require **higher investment levels** and faster growth rates than attained in the 1980-85 period. According to Chinese projections, power generation targets will require additions to capacity averaging ten million kilowatts per year for the next 15 years. In contrast, power-generating capacity added in the last five years has averaged 3.3 million kwh per year. To reach the goal of quadrupling by 2000, electric power generation must grow at an annual average rate of 7.2 percent, higher than the 6.5 percent average from 1980 through the first half of 1985, but consistent with the higher growth rates of the last several years (see Table 4-7). The

1990 target indicates slower growth from 1986 to 1990 (6.5 percent per year), and then faster growth of 8.1 percent per year until 2000.

According to Chinese projections, **nuclear** plants will provide 5 percent of China's electricity needs by the year 2000, with total generating capacity of 10,000 megawatts. However, the nuclear power industry is not without opponents, so these plans **could be scaled down significantly.** In any case, the Chinese regard nuclear power as a third-priority supplement to the already high levels of investment being made in high power lines for transmitting hydro and thermal electricity from the inland to industrial centers along the coast, and investment in coastal thermal power plants with railroads and ports to supply them with coal.

Of the 10,000 megawatts capacity planned for the year 2000, only 2,000 to 3,000 megawatts will come from **imported technology** and equipment, according to the Ministry of Nuclear Industry. At present, five major projects are in the planning stage, four of which could involve foreign participation.

In spite of the high visibility of nuclear and offshore ventures, the strongest prospects for **technology transfer** are in the onshore oil and coal industries. Chinese demand for mining, drilling, refining, transmission, and other energy-related technologies is growing. For these reasons, China's **coal industry** is becoming **more outward-oriented.** Recent organizational changes at the China National Import & Export Corporation (CNIEC) and China National Coal Development Corporation (CNCDC) are geared to increasing economic and technical cooperation, according to a CNIEC official. In other words, these changes are meant to orient China's coal industry toward more joint energy ventures, technology imports, and coal exports. The dozen or so joint ventures now underway in the coal industry illustrate this outward orientation.

Coal exports **are therefore also a** major part of China's long-term energy development **strategy, and also an important part of the agreements anticipated with foreign investors.** Joint ventures increasingly involve production sharing (9.4 of the 11.9 million tons of washed coal expected to come out of the Occidental-Pingshuo mine is to be exported) and de-regulation in the coal industry. Shanxi province, China's biggest coal producer, has been given the go-ahead to export 600,000 tons of coal in 1985, the first time Shanxi has exported coal directly. Provincial officials have stated that the income from direct coal exports will be spent on equipment and technology imports.

For the near future, because of China's domestic coal needs and the difficulty of transporting coal from the interior to port cities, coal exports will not share the dramatic position in China's balance of payments now held by petroleum. Exports grew only 5.2 percent to 4.83 million tons in 1984, and fell by 2.4 percent in the first half of 1985 over the first half of 1984. This is slower than the growth in output, and substantially less than the growth in petroleum exports. By the middle or late 1990s, however, China could supplant traditional coal suppliers in large markets like Japan.

CHAPTER FIVE - Investment and Capital Construction

EXECUTIVE SUMMARY

TRENDS

* Investment growth of over 40 percent in the first half of 1985 is accompanying the largest construction boom in China's history. The third quarter has slowed, however.
* Decentralized investment decision-making is a major cause of construction boom.
* The investment boom has influenced China's import boom, which is heavily concentrated in investment goods.

POLICY

* Peking's major efforts are aimed at slowing investment.
* Control measures are largely administrative, but efforts to discipline banking point to future use of credit controls.
* An investment responsibility system is meant to improve investment quality and timely completion.

PROBLEMS

* The overly-ambitious scale of investment has caused critical shortages of materials and general inflation.
* High prices for goods with poor market prospects have caused unprofitable and wasteful investment decisions.

PROSPECTS

* In spite of an investment slowdown in 1986, China's investment levels will continue to be very high by world standards.
* Increasing use of interest rates to control credit will make foreign lenders more competitive, especially if there has been a major devaluation of the yuan.

TRENDS

Investment plays a central role in the growth of any economy, whether it be Western, Soviet, or East Asian. The current rapid decentralization of China's investment and the extraordinary overall growth of recent investment outlays are major causes of the 1985 industrial boom.

Since 1949, China has had high savings and capital accumulation rates relative to total output. After a temporary dip in the early 1980's, the capital accumulation rate has once again grown to over 30 percent. Although capital accumulation has not been the only source of growth, investment emphasis on the energy, transportation, communications, and education sectors appears to target the most critical bottlenecks in China's current growth process. Investment plans have a strong influence on trade as well. Imports in the first half of 1985 confirm that China is investing heavily in capital goods from abroad rather than importing a majority of consumer durables and foodstuffs.

The most remarkable features of China's recent and current investment patterns, however, are the rapid growth of investment funded by non-state sources, primarily enterprise earnings and bank borrowings, and the growing investment in rural industry. In spite of the importance of rural investment, however, statistics show that the major concentration of new state-budgeted investment is taking place in existing urban industrial centers, pointing to a further concentration of industrial activity there in the future.

The portion of China's available national income used for investment is shown in Table 5-1 below. Such a high rate of investment over at least the last ten years, roughly 30 percent of available national income, typifies the traditionally high accumulation rate. Except for a few years in the early 1980s, investment has always accounted for at least 30 percent of available national income. In 1984, investment again surpassed the 30 percent level and, given the high investment growth in early 1985, the accumulation rate is apparently continuing to rise.

Table 5-1
INVESTMENT AND SOURCES OF GROWTH

	(Billion Yuan)		(Percent)				
	Investment	National Income Available	Savings Rate	Average Capital Productivity	Real NMP Growth	Growth due to Investment	Growth due to Other factors
1975	83.0	245.1	33.9	24.7	8.3	7.9	.4
1976	74.8	242.4	30.9	22.1	-2.7	8.4	-11.1
1977	83.2	257.3	32.3	22.3	7.8	6.8	1.0
1978	108.7	297.5	36.5	23.4	12.3	7.2	5.1
1979	116.1	335.6	34.6	23.1	7.0	8.5	-1.5
1980	116.5	368.6	31.6	22.7	6.4	8.0	-1.6
1981	110.6	388.7	28.5	22.2	4.9	7.2	-2.3
1982	123.6	425.6	29.0	22.7	8.3	6.3	2.0
1983	140.5	473.1	29.7	23.2	9.8	6.6	3.2
1984	171.8	550.6	31.2	24.3	13.9	6.9	7.0

SOURCES: Official data and RCR calculations (J5CBM51t.R5I). All investment figures are in current yuan.

Rapid growth of investment and capital stock is traditionally seen as the secret to rapid industrial growth. This is especially true for centrally planned economies. But for China in 1984, analysis shows that although investment was high, other factors more difficult to measure directly were responsible for more than half of overall output growth. The three columns on the right of Table 5-1, above, give the results of analysis dividing the sources of overall growth between growth of the capital stock and growth in other productive factors, such as labor.

Investment (in current yuan) grew over 22 percent in 1984 compared to 1983 and accelerated to close to 40 percent growth for the first half of 1985. This is considerably faster than the growth of real output as measured by Net Material Product (NMP). Investment, however, is only the addition to capital stock, which grew much less than growth of output, averaging roughly 6.9 percent in 1984. Of the total 13.9 percent NMP growth, then, investment brought about 6.9 percent and other factors a full 7.0 percent. Although some of the 7.0 percent growth contribution of non-capital factors is due to good weather in 1984, much of this "extra" output increase is due to the reforms in both agriculture and industry, which have raised productivity for existing productive assets as well as new ones. This increase in productivity is illustrated in Table 5-1 by the increase in "capital productivity," which indicates the value of output produced for each yuan of capital.

Instead of relying only on investment, China is clearly beginning to tap less predictable sources of growth. For example, many of the industrial reforms are prompting the development of the more labor-intensive light and rural industries and are introducing greater quality control. At the same time, wage and bonus reforms are evoking greater efforts from the existing labor force.

The investment boom in early 1985 is closely linked with both the industrial output increase and the import surge that occurred during the same period. China's first quarter imports were dominated by metals, machinery, and producer goods, which indicate that China is spending foreign exchange for capital goods as opposed to consumer imports. Foreign imports have allowed China to expand and modernize its industrial base and to ease critical bottlenecks, especially in metals.

Table 5-2
STATE CAPITAL CONSTRUCTION INVESTMENT BY SECTOR, 1979-1984

	1979	1980	1981	1982	1983	1984	1984
Sector			(percent growth)				(Bil Yuan)
Total	4.5	6.8	-20.8	25.4	7.0	25.1	74.32
Industry Total	-6.0	7.3	-21.6	20.6	15.3	21.0	34.16
Light Industry	4.4	66.3	-14.8	7.1	-17.9	9.5	4.24
Heavy Industry	-7.2	-.7	-23.2	24.1	22.5	22.8	29.92
Of Which: Energy	-3.4	4.6	-20.7	11.1	24.6	30.1	16.60
Agriculture	8.6	-10.2	-43.9	16.8	25.6	4.7	3.71
Transport, Communication	-5.8	-2.7	-35.1	41.4	45.8	39.0	10.85
Commerce & Foreign Trade	34.5	38.9	-2.0	28.4	-25.3	21.6	3.52
Other Departments	36.1	13.1	-7.9	29.7	-16.2	30.3	22.08
Of Which: Research, Culture, Education, Health	53.7	32.3	-1.5	16.5	-27.7	32.6	7.88

SOURCES: State Statistical Bureau official data. (J5BY51T.T5J)

State budgets for 1984 and 1985 show a renewed emphasis on investment, but the state investment pattern emphasizes heavy industry, transport, and "other" departments, perhaps with military significance. Table 5-2, above, shows the very low level of state investment in agriculture, light industry, and commerce. Investment in heavy industry, which includes investment in the critical energy sector, accounted for 32 of 74 billion yuan invested in 1984, and investment in the transport sector accounted for another 11 billion. Agriculture, by contrast, received only 4.6 billion in 1984 and light industry only 3.5 billion. Under the various industrial and urban reform programs, investment in light industry and agriculture are meant to be largely self-financed from enterprise and household earnings.

So-called "non-productive investment" as a portion of total investment declined from 43 percent in 1981 to 40 percent in 1984 and indications this year are that it will continue to decline as over-ambitious investment is brought under control. Non-productive investment refers to investment in housing, hotels, meeting halls and similar types of buildings that do not yield a measurable output in physical commodities. Construction of these non-productive structures was postponed this year by the Peking and Tianjin governments when the central government called for an overall slowdown of investment.

Table 5-2 above also gives a clear picture of the cyclical ups and downs in overall investment since 1979. Most striking is 1981, when investment contracted throughout the economy. Less recognized is the much smaller investment slow-down in 1983, when light industry, agriculture, and, most significantly, "other" investment all contracted, reducing the overall investment growth rate from 25 percent to 7 percent. The 1983 slowdown is important because it may be a precursor to a similar mini-contraction in 1986, after the 1984-85 investment boom has matured and central authorities have learned to use more indirect credit control mechanisms, in particular, higher interest rates.

The general and more severe investment contraction in 1981 deserves comment because it represents an often misinterpreted phenomenon. Traditionally, Chinese officials have pointed to this "readjustment" as a deliberate policy to restructure the economy. In fact, the very large state budget deficits of 1979-80 forced drastic cutbacks in state expenditures focused primarily on state investment. The budget deficits, far from planned, seem to have resulted from a combination of war expenses related to the 1979 conflict with Vietnam, new heavy food subsidies in 1980, and in general very large investments from the mini-great leap of 1978-79. This same 1981 investment contraction was responsible for the fall in heavy industrial output that same year.

Sources of funding for investment are also undergoing dramatic change. As part of China's effort to make enterprises more efficient and enterprise managers more accountable, banking reforms are shifting the source of investment funds from state budget allocations to bank loans requiring the payment of interest. Enterprises are also now being allowed to use their after-tax retained earnings and depreciation funds to finance their own investments. Such moves will eventually help China to direct its limited investment resources to their most efficient uses.

Table 5-3
STATE AND NON-STATE CAPITAL CONSTRUCTION INVESTMENT IN 1984
(billion yuan)

Type	Total Investment	Allocated in Plan	Out of State Plan
Total Investment:	105.0	69.0	36.0
Annual budget allocation	47.9	31.6	16.3
Out of budget investments	57.1	37.4	19.7

SOURCES: Official State Statistical Bureau data (J5BY64T.T5G).

The shift away from investment financed from the state budget under the state plan is as important as the accelerated growth of investment. This shift is illustrated in Table 5-3, above. Out-of-budget investment funds have become an important source of investment financing, especially in light manufacturing and rural industries. These non-budget investments, however, have also consistently aroused the displeasure of officials responsible for financing the state budget investment program. Non-budget investments use funds which would otherwise end up in state hands to invest in the state program. In the first seven months of 1985, state budget investment was only 8.8 percent higher than it was during the same period of 1984, while "outside" of budget investment increased 90 percent. Furthermore, because of "excessive" investment "outside" the budget, many scarce and expensive materials are increasingly diverted from state to local projects. As a result, the state project completion rate fell from 24.4 percent in the first half of 1984 to 15.6 percent in the first half of 1985.

The chorus of official complaints about runaway non-budget investment was especially loud in mid-1985, pointing again to the possibility of official moves in 1986 to control unwanted capital construction outside the state budget. Peking municipality took the lead in controlling construction investment in July of 1985 by announcing a 30 percent reduction in capital construction expenditures and a revision of construction project priorities.

Technical transformation, unlike new capital construction, has been financed largely from non-budget funds as shown in Table 5-4 below. Furthermore, non-budget investment surges and contractions match the movements of investment in light industry in Table 5-2. Non-budget investment in capital construction grew 37 percent in 1984, when light industrial growth was so pronounced. Various reports for 1985 indicate that non-budget investment is growing even more this year. Given the see-saw pattern of investment emphasis since 1978, alternating between heavy and light industry, and between budget and non-budget sources, it is tempting to anticipate a similar contraction in 1986 non-budget investment in light industry.

Table 5-4
SOURCES OF FUNDS INVESTED IN FIXED ASSETS BY STATE-OWNED UNITS 1978-1984
(billion yuan and percent growth)

	Total Fixed Asset Investment				Capital Construction		Technical Transformation	
Year	Total Fixed Asset Investment	State Budget	Non-State Budget	Non-State as % of Total	State Budget	Non-State Budget	State Budget	Non-State Budget
1978	66.9	44.4	22.5	33.6	41.7	8.4	2.6	14.1
1979	69.9	46.2	23.7	33.9	41.9	10.5	4.4	13.2
1980	74.6	38.2	36.4	48.8	34.9	21.0	3.3	15.4
1981	66.8	28.6	38.1	57.0	25.2	19.1	3.5	19.0
1982	84.5	31.0	53.6	63.4	27.7	27.9	3.3	25.7
1983	95.2	38.7	56.5	59.3	34.6	24.8	4.1	31.7
1984	118.5	-	-	-	40.4	33.9	44.2*	
Growth Rates:								
1979	4.6	4.1	5.5	.9	.3	25.5	64.8	-6.4
1980	6.7	-17.3	53.3	44.0	-16.6	99.8	-24.4	16.5
1981	-10.5	-25.1	4.8	16.8	-28.0	-8.7	5.8	23.2
1982	26.6	8.1	40.6	11.2	10.0	45.7	-5.5	35.4
1983	12.6	24.9	5.5	-6.5	25.0	-10.9	23.9	23.4
1984	24.5	-	-	-	16.8	36.7	23.5*	

*NOTE: These 1984 data are for budget and non-budget combined.
SOURCES: Official State Statistical Bureau data. (J5BY58T.T5G)

A final interesting characteristic of fixed asset investment revealed in Table 5-4 is the consistent and rapid growth of so-called "technical transformation" investments. Technical transformation investments are made to existing plant and equipment. Although modest, they can have a very great influence on the productivity of both existing and newly acquired capital equipment. This important form of investment has been immune to the fluctuations in capital construction. Reforms in the budget process are enhancing its position even more. As of 1985, enterprises are allowed to retain their depreciation funds and apply them directly to technical transformation investments.

Just as China's industrial growth has been highest in advanced industrial centers, state-budgeted investment in fixed assets has tended to concentrate in areas well endowed with such assets. Table 5-5, below, shows that Shanghai and Peking had the largest 1983 investment in fixed assets. Comparing investment to existing net assets shows remarkably high rates in some cities. Guangzhou appears to be adding more than half again as many fixed assets as already exist, a higher rate than Shanghai, Peking or Tianjin. In spite of official efforts to develop China's West and other remote areas, natural economic and geographical advantages will continue to favor already developed areas, particularly on the coast.

Table 5-5
INVESTMENT IN 20 KEY CITIES 1983
(billion yuan)

City	Capital Construction Investment by State	Technical Updating Investment by State	Total Fixed Asset Investment	Net Value Fixed Assets	Investment per Fixed Asset Value (%)
Shanghai	4.3	1.7	6.04	14.61	41.4
Peking	2.6	1.1	3.72	10.52	35.3
Wuhan	.7	.4	1.07	7.43	14.5
Tianjin	2.2	1.1	3.25	7.01	46.3
Chongqing	.7	.4	1.08	6.67	16.2
Anshan	.2	.4	.52	4.63	11.2
Lanzhou	.4	.3	.73	4.42	16.5
Shenyang	.7	.4	1.10	4.28	25.7
Taiyuan	.7	.3	.91	3.79	24.1
Harbin	.6	.3	.93	3.57	26.2
Xian	.6	.3	.89	3.56	25.1
Chengdu	.6	.3	.89	3.55	25.1
Guangzhou	1.0	.8	1.81	3.25	55.8
Nanjing	.6	.2	.83	3.17	26.3
Dalian	.5	.3	.77	2.89	26.6
Fushun	.2	.3	.41	2.69	15.4
Kunming	.4	.2	.64	2.33	27.5
Qingdao	.2	.3	.44	2.06	21.3
Changchun	.4	.1	.51	1.83	27.7
Jinan	.3	.2	.44	1.73	25.4

NOTE: Net Value of Fixed Assets refers to state-owned independent accounting units. All other figures refer to investments of more than 50,000 yuan.
SOURCE: Official State Statistical Bureau data. (J5BY55T.T5G)

As state-budgeted investment continues to favor the already-developed urban areas, non-budget investment funds are increasingly being generated by and invested in the less-developed rural areas. The majority of these non-budget funds are being invested in light industries in rural areas, and village industry is apparently still growing rapidly in 1985. Self-generated investment funds, which are growing much faster than state-budgeted investment funds, have already diverted scarce resources from state-planned projects, and by third-quarter 1985 the central government seems to be taking steps to control them.

POLICY

In addition to maintaining the investment emphasis on energy and transport, official policy in 1985 has focused on controlling the overall rate of investment growth, which is considered to be both an inflationary threat and the cause of critical raw material shortages. Although enhancing investment quality will possibly emerge as a major long-term goal, for the time being official efforts are concentrating on overall control of volume. As one official put it, "Once you get the individuals and enterprises in the saddle, it is hard to get them out." The best long-run solution is a combination of higher prices for critical investment goods and higher interest rates from banks. Even though interest rates were raised slightly this year, Chinese leaders seem unprepared to shift quickly to reliance on such indirect, market-oriented policies. (See Chapter 6, Banking and Finance.)

To slow the high rate of capital construction investment, central and local authorities have instituted various measures, including a construction responsibility system, a nationwide review of the rate of completion of capital construction projects, and the institution of a system of priorities for completion of projects already undertaken. In spite of these efforts, capital construction investment has continued to grow rapidly, and state finance officials have indicated that it may take up to two years to bring the level of investment in line with the growth of the national economy.

The State Council announced in early September that investment in capital construction throughout China will be restricted to the level assigned by the State, without exceptions. Banks were instructed to stop lending for projects not in the State plan and, in a move to control out-of-budget capital construction investment, the State Council also stipulated that self-generated investment funds deposited with the Construction Bank after June 30 could not be used for capital construction projects this year.

Authorities have also announced that certain types of construction now underway will be given priority for completion. Peking municipality has indicated that housing, hospitals, schools, buildings for foreign affairs departments, and joint-venture projects with foreign funds for which contracts have been signed will be targeted for completion first. Construction of office buildings, exhibition halls, and auditoria will be suspended. Tianjin municipality postponed construction of hotels and guest houses that were not urgently needed and will concentrate on completing housing and urban utility projects instead.

A construction and investment responsibility system has been implemented in the State's effort to improve the quality of construction, shorten completion times, and make bankers and managers accountable for the investment in construction. Peking municipality has announced that it will dismiss construction teams that have come from other cities to work on projects in the capital if it is found that the quality of their work is low or inconsistent. Construction bureaus have been told to adopt open bidding systems to cut costs and improve delivery and completion times.

To improve construction project completion rates and to alleviate the shortage of building materials, the State has ordered a nationwide check on the speed of construction. Peking and Tianjin have already reduced municipally-controlled capital investment.

PROBLEMS

As indicated in earlier sections, over-ambitious capital construction investment, due mainly to the great increase in locally-financed or out-of-budget projects, is one of the most serious problems facing China's economic planners this year. The construction boom itself is causing serious problems in other areas of the economy as well. The main cause for concern over growing out-of-budget investment arises from the fact that much of it is undertaken without regard to state economic plans or market demand for the products that will be produced by the new projects. Another problem arises as more enterprises and local authorities undertake expansion and construction projects with the funds they have accumulated for investment; local and out-of-budget projects siphon critical building materials away from state projects. Already scarce resources are spread over a growing number of construction projects and the completion of state-planned projects lags behind schedule. The quality of construction projects has suffered, and construction materials have been wasted.

Local officials do not always investigate the market potential for the products of new factories that they are constructing with self-generated investment funds. A major reason is that prices before 1985 were fixed at high levels for many manufactured goods, reflecting Maoist policy which made them "luxury" goods that were sold to absorb excess purchasing power. These high prices, however, did not result from any large demand for such products, which were and still are often of marginal quality. So, current investment programs inspired by plans for profits from such "luxury" markets have poor prospects and have caused investment funds to be wasted and scarce building materials to be tied up in uncompleted or idle new factories. For example, one study showed that when all refrigerator and automobile manufacturing plants now under construction are completed, capacity will far exceed estimated long-term demand.

PROSPECTS

The prospects for investment in China point to slower investment growth in 1986, although the growth will still be quite high by international standards. It is interesting that this slow-down will be brought about in part through indirect measures, especially higher interest rates, credit restrictions, and price adjustments for critical bottleneck materials as well as for final goods. Sources of investment funds will show two quite separate trends. One trend is resurgent state budget participation in investment funding, concentrating on major bottleneck heavy industrial sectors. The other is a growing sophistication of investment funded by private borrowing and the use of retained earnings. Future investment should lead to growth not only from new productive capacity, but also from the enhanced productivity of existing assets, as more labor-intensive methods and better management make better use of plant and equipment. Finally, the serious shortage of modern technology and quality control suggest a strong and growing role for Western and Japanese capital goods. China appears to be husbanding its scarce foreign exchange for precisely this purpose.

The new 1986-90 five-year plan stresses that a slowdown in economic growth will occur gradually during 1986-87, but strong third-quarter 1985 signs of investment controls probably mean that investment growth in 1986 will be cut back significantly, although not nearly so severely as in 1981. According to the Seventh Five Year Plan, state capital construction investment will remain at about 1985 levels for 1986 and 1987. Given the target of average annual growth of 7 percent through 1990, this implies 12 percent annual growth in state capital construction from 1988 to 1990. Nevertheless, by international standards, China's share of capital accumulation in national income will remain very high at roughly 29 percent. This continued high rate of saving and investment, in turn, will be a major stimulus to overall economic growth.

In the past, fluctuations in non-budget and overall investment have been brought about by relatively direct administrative controls over funds and their use. With the urban industrial and banking reforms in place since 1984, central authorities will have to learn to use more indirect measures, and one of the likely candidates is the interest rate. Higher interest rates for bank loans and deposits will have a dual effect, rationing investment funds to the more profitable projects and attracting enterprise funds for deposit which might otherwise be used for less optimal projects. In addition, higher domestic interest rates will make borrowing from foreign banks a more attractive option for domestic enterprises. In this case, a guarantee of foreign exchange available for repayment will become the deciding factor for many prospective loans. The attractiveness of foreign interest rates, however, will also be affected by movements in China's foreign currency exchange rate.

If Chinese borrowers anticipate devaluations to match China's inflation relative to world price changes, they will see that foreign interest rates are higher than they in fact appear. This is because loans will be denominated in dollars or yen, and a devaluation will require more Chinese yuan for repayment of the same foreign exchange loan. If there is a major devaluation at the same time that domestic interest rates climb, individual enterprises, with their new freedoms to use foreign sources, might gamble that further devaluations are a long way off and start borrowing internationally. The withholding of official guarantees for hard currency repayment to foreign lenders will then become an important credit-control mechanism.

The division of Net Material Product growth into its investment and "other" components in Table 5-1, above, allows speculation about future economic growth. With urban reforms and the roughly 20 percent pace of industrial growth in 1985, and in spite of relatively poor weather for agriculture, non-investment sources of growth in 1985 are likely to decline only slightly. For how many years can China enjoy this boost to its overall growth? Given the large inventory of inefficient capital assets, such "bonus" growth could continue into the 1990's. 1986 will probably see a temporary slowdown across the board; in output, investment, and non-investment productivity growth. After 1986, however, the pattern of sustained growth enhancement from extra capital productivity is likely to resume. If this is the case, per capita income in the intermediate- and long-run could rise much more rapidly than is generally anticipatated.

Since China's initial opening to the West and Japan in the late 1970s, acquisition of foreign technology has been a consistently important part of investment planning. Patterns of imports over the last 12 months have confirmed this bias for capital goods. At the same time, China has shown itself increasingly willing to import capital goods and raw or semi-finished materials to alleviate critical bottlenecks. The vice-director of the State Planning Commission stated in March of this year, at the height of the foreign exchange rundown, that foreign investors will be encouraged to increase the production of goods whose quantities now fall short of domestic demand. China is also seeking foreign cooperation to develop sources of raw materials and to modernize existing plants and equipment. The announcement of production goals for the 1986-1990 five-year plan was followed by a list of cooperative projects to be discussed with foreign firms. For example, non-ferrous metal production is to be doubled in the next five years under the Plan and China will soon be offering cooperative projects in this area to foreign investors.

In sum, China's sustained investment growth is a fundamental part of the overall process of rapid development apparently now under way. The policies and programs now being implemented point to good prospects for both continued long run increases in not only investment levels but also investment quality. In the effort to improve quality, foreign methods, equipment, and materials will play increasingly important roles.

CHAPTER SIX - Banking and Finance

EXECUTIVE SUMMARY

TRENDS

* There has been a fundamental reorganization of the state budget, emphasizing taxation and loans and phasing out profit deliveries and enterprise allocations.
* Despite a planned budget deficit for 1985, half-year results show an unexpected surplus.
* Interest rates and personal savings have risen steadily as a result of major leadership changes at China's top banks.

POLICY

* The source of investment funds has shifted from state budget allocations to bank loans.
* Rapid growth in capital construction investment is being slowed by raising interest rates and establishing reserve requirements.
* Tax revenue is now the major source of budget revenue.

PROBLEMS

* The traditional close relationship between local officials and branch bank leadership is impeding banking reform.
* Local authority over the granting of loans led to an excess number of loans being granted and a waste of investment funds.

PROSPECTS

* The central government has shown that it will use the state budget, and taxes and loans, as tools to drive economic development in the Seventh Five Year Plan.
* China's bank leadership has indicated that financial policies will become more flexible.

TRENDS

China's banking and finance in 1984-85 have undergone major changes that are transforming a static financial system that merely implemented state policy to a dynamic system that is using increasingly more sophisticated financial tools to effect economic reform. In just the past year, there has been a fundamental reorganization of the state budget, a growing budget surplus as opposed to a planned deficit, and widely publicized efforts to discipline enterprise tax evasion. China's top banks have undergone sudden major leadership changes, interest rates have risen, and personal savings have grown rapidly. China's new bankers now permit hard currency personal savings accounts, and have made more than seasonal efforts to absorb excess private currency holdings. In addition, the extraordinary growth in the money supply and loans that began in 1984 is probably the most significant cause of 1985's rapid industrial growth.

The sudden and unexplained replacement of the head of the People's Bank of China, the central bank, with Mme. Chen Muhua in early 1985, supports the interpretation that 1984's very rapid money growth resulted from the spread of incentive and management reforms to the specialized banks and from the influence of local officials in branch bank lending decisions. Mme. Chen has taken a series of steps to strengthen central control over loans and the money supply in order to stem the drain on currency reserves. In the first half of 1985, bank reserves were sapped by a surge in large development loans because some businesses did not reinvest their profits and instead relied on loans to expand production. Mme. Chen also announced several new methods under consideration for continuing the withdrawal of excess currency from circulation.

The central bank's president is pursuing a policy of financial liberalization which emphasizes the regulatory role of banks and interest rates. Interest rates on loans and savings deposits are being raised to slow investment in fixed assets and to absorb more currency. Mme. Chen has also stated that credit loans should be used to control the industrial growth rate which, at close to 20 percent for 1985, is considered too high by economic planners.

The continuing investment in capital construction has been caused, in part, by the fact that the interest rate on loans for fixed asset investments is lower than the rate on loans for circulating funds and savings deposits. The state finance minister reported in late July that the government has still been unable to control runaway construction investment which is overheating the economy. Official sources confirmed high growth figures by reporting in July that urban industries have been averaging 20 percent annual growth while rural industries have been averaging 50 percent annual growth. Loans made by the Agricultural Bank of China to rural industries in the first half of 1985 were 3.2 times higher than loans made in the same period of 1984.

The increase in total savings deposits during the first half of 1985 was 72 percent higher than the increase in total savings during the same period of 1984. The April increase in the interest rate paid by the People's Bank of China on fixed deposits has been cited as one of the causes of the surge in savings; 79 percent of the increased savings in the first six months of 1985 was in the form of fixed deposits. Urban and rural savings deposits of all types increased by 19 percent and 13 percent respectively during the first half of 1985. Interest rates on savings deposits were raised again on August 1.

The Bank of China, the nation's foreign exchange bank, has also reported a sharp increase in savings deposits for 1985. Under an experimental system being implemented at Bank branches in Jiangsu province, hard currency savings deposits may be withdrawn at any time. As a result of this new policy, hard currency saving deposits in Jiangsu at the end of July were more than double the end-1984 figure.

The People's Construction Bank, which is the state agency in charge of funding capital construction projects, has stemmed the unprecedented outflow of bank loans and boosted its deposits and reserves since June. It has succeeded in increasing its deposits by 7 billion yuan and in recalling 1.54 billion yuan of unauthorized loans. It has also helped debtors raise funds to repay loans.

The importation of two billion dollars worth of consumer durables early in 1985 allowed the state to withdraw some excess currency from circulation but contributed to the trade deficit which totaled 4.6 billion dollars for the first half of 1985. Foreign exchange reserves fell almost 3 billion dollars in the first quarter alone.

Tax evasion has been an increasingly more apparent problem. The bonus tax, designed to curb the indiscriminate issuance of bonuses to staff and workers and control the excessive increase in consumption funds, has been difficult for the state to collect. As late as May of 1985, the state was still urging provinces and municipalities to collect and remit taxes on bonuses paid in 1984.

Table 6-1
STATE BUDGET 1977-1985

	(Billion Yuan)			(Percent Growth)	
Year	Revenue	Expenditure	Surplus or Deficit(-)	Revenue	Expenditure
1977	87.45	84.35	3.10	n/a	n/a
1978	112.11	111.09	1.02	28.2	31.7
1979	110.33	127.39	-17.06	-1.6	14.7
1980	108.52	121.27	-12.75	-1.6	-4.8
1981	108.95	111.50	-2.55	.4	-8.1
1982	112.40	115.33	-2.93	3.2	3.4
1983	124.90	129.25	-4.35	11.1	12.1
1984	146.50	151.50	-5.00	17.3	17.2
1985 *	153.50	156.50	-3.00	4.8	3.3
1985 (Jan-Jun)	81.36	69.76	11.60	25.9	15.0

*NOTE: The 1985 annual data are from the 1985 draft budget.
SOURCES: Official data from the State Statistical Bureau, communiques, and Ministry of Finance official speeches. (J5BQ01)

State budget data for 1984 and the draft budget for 1985 show a rapid shift toward tax revenues and a renewed importance of state-budgeted investment. The growth of the 1984 budget was particularly impressive. The more than 17 percent increase in overall expenditures in 1984, following double-digit growth in 1983, resembles very much the rapid acceleration of expenditures in the "mini-Great Leap" of the late 1970s, which resulted in serious deficits, drastic fiscal retrenchment, and even contraction in heavy industrial output.

Table 6-1 above, however, shows that the 1979-1981 crisis years were very different from the current fiscal path. By 1979, revenues actually had fallen, opening a large deficit. Revenues continued to deteriorate in 1980 as outlays contracted, and the state was forced into the drastic retrenchment it camouflaged as a policy of deliberate "Readjustment." Since 1983 the situation has changed dramatically. Revenue growth has kept pace with expenditures, and in the first six months of 1985 the budget was actually in surplus. There is still cause for worry that 1985's industrial output burst might leave commercial departments with losses from stockpiles of unsalable goods, but conditions in 1985 are still very different from those of 1979, and the 1985 pace to date shows no reason for concern.

The very rapid money supply increase in the second half of 1984 was one of the major contributors to China's explosive industrial growth (21 percent through September) in 1985. Rather than being the result of a simple policy slip-up as reported by Premier Zhao Ziyang this spring, the very rapid money growth seems to have resulted from the spread of incentive and management reforms to the specialized banks and from the hold-over influence of local (county and town) officials over branch bank lending decisions. Corrective measures require rethinking and further refining of China's banks and new banking policies.

Table 6-2
1985 MONTHLY INDUSTRIAL GROWTH

	January	February	March	April	May	June	July	August
Percent Growth*	24.5	21.3	23.0	24.1	22.8	22.7	20.8	17.4

* NOTE: Growth is measured relative to the same month in the previous year.
SOURCES: Official State Statistical Bureau data. See Chapter 3, Industry, for details.

Although many factors share responsibility for the extraordinary industrial growth shown in Table 6-2 above, sudden expansion of the money supply is probably the most significant. From November 1984 to September 1985, China's industrial output increased by from 17 to 25 percent every month, over the same month in the previous year. During this same period, China's money supply grew rapidly, with 55 percent growth in 1984 and 54 percent growth in the first half of 1985, as shown in Table 6-5 below.

The rapid rate of money supply growth for 1984 and the first half of 1985, shared evenly between currency and enterprise deposits, is a significant acceleration from the 19 percent growth in 1983 and the 8 percent growth of 1982. It is more reminiscent of the roughly 25 percent rates of money growth in 1979-80, the years of China's most severe budget deficits. 1984's growth however, is not the result of government borrowing to cover a deficit. Rather, it represents a very rapid increase in bank lending to enterprises. This difference in the source of money supply increases may help explain why they have resulted in real growth and not serious inflation. Data on annual increases in China's money supply are given in Table 6-3 below.

Table 6-3
MONEY SUPPLY GROWTH 1977-1985

Year	(Billion Yuan) Total Money Supply	Of Which: Currency	Currency Share (percent)	(Percent Growth) Money Supply	Currency
1977	58.01	19.54	33.7	n/a	n/a
1978	58.04	21.20	36.5	.1	8.5
1979	73.66	26.77	36.3	26.9	26.3
1980	91.93	34.62	37.7	24.8	29.3
1981	107.04	39.63	37.0	16.4	14.5
1982	115.70	43.91	38.0	8.1	10.8
1983	137.05	52.98	38.7	18.5	20.7
1984	212.59	79.21	37.3	55.1	49.5
1985*	201.24	75.75	37.6	53.6	54.3

SOURCES: 1977-84, official data (J5BQ03.T5J). 1985 data for first six months only.

The causes and progress of 1984's money supply increases are particularly difficult to gauge because of the seasonality of Chinese monetary flows. In general, growth of loans and money supply is very low and even negative in the first half of the year, with all of the year's growth coming in the second half, and in some cases all in the fourth quarter. This is perhaps best illustrated by 1982 data on the growth of total bank loans by quarter, shown in Table 6-4 below.

Table 6-4
SEASONALITY IN TOTAL LOANS, 1982

	IV'81	I'82	II'82	III'82	IV'82
Loans (Billion Yuan)	277	266	268	277	305
(Percent Over Previous Quarter)	n/a	-3.7	.7	3.2	10.3

SOURCES: Official data, People's Bank of China.

In 1982, which in many ways was as "normal" a year as there has been in the past five to choose from, the total of loans outstanding only recovered to the level of the previous year by the third quarter. That is, there was no growth from the end of the fourth quarter 1981 to the end of the third quarter 1982. All of the growth in loans outstanding for 1982 occurred in the fourth quarter: October, November and December. In his March speech before the Party Congress, Premier Zhao complained that 48 percent of the 1984 loan increase occurred in December. But when we consider the seasonality illustrated above, and remember how important December is for meeting quotas and concluding state procurements,

Table 6-5
QUARTERLY MONEY SUPPLY 1981-1985

Year/Qtr		Amount (Billion Yuan)			Growth Over Previous Quarter (Percent)		Growth Over Same Quarter, Previous Year (Percent)	
		Total Money Supply	Of Which: Currency	Currency Share (percent)	Total Money Supply	Of Which: Currency	Total Money Supply	Of Which: Currency
1980	IV	91.93	34.62	37.7	n/a	n/a	n/a	n/a
1981	I	88.31	32.56	36.9	-3.9	-6.0	n/a	n/a
	II	86.83	30.64	35.3	-1.7	-5.9	n/a	n/a
	III	92.12	33.32	36.2	6.1	8.7	n/a	n/a
	IV	107.04	39.63	37.0	16.2	18.9	16.4	14.5
1982	I	102.14	37.79	37.0	-4.6	-4.6	15.7	16.1
	II	97.56	35.25	36.1	-4.5	-6.7	12.4	15.0
	III	102.95	37.74	36.7	5.5	7.1	11.8	13.3
	IV	115.70	43.91	38.0	12.4	16.3	8.1	10.8
1983	I	113.13	43.33	38.3	-2.2	-1.3	10.8	14.7
	II	113.52	42.20	37.2	.3	-2.6	16.4	19.7
	III	119.73	46.73	39.0	5.5	10.7	16.3	23.8
	IV	137.05	52.98	38.7	14.5	13.4	18.5	20.7
1984	I	132.82	51.12	38.5	-3.1	-3.5	17.4	18.0
	II	131.01	49.10	37.5	-1.4	-4.0	15.4	16.4
	III	152.10	58.72	38.6	16.1	19.6	27.0	25.7
	IV	212.59	79.21	37.3	39.8	34.9	55.1	49.5
1985	I	216.96	78.76	36.3	2.1	-.6	63.3	54.1
	II	201.24	75.75	37.6	-7.2	-3.8	53.6	54.3

* SOURCES: 1977-1985, official data. (J5BV05S.B5F, J5BQ05.T5J)

48 percent may not be very far out of the ordinary at all, even if it is a little high. It certainly is not as high as it was made out to sound in Zhao's speech, where no mention at all was made of seasonality. The importance of seasonality is further illustrated by quarterly data on the money supply, which go back to 1981 and are presented in Table 6-5 above.

The money supply growth rates in columns 4 and 5 of Table 6-5 are calculated over the previous quarter and show that in virtually every year the money supply falls in the first two quarters, grows moderately in the third quarter, and then grows very fast in the fourth quarter, only to fall back again in the first quarter of the following year as the pattern begins again. The pattern is even more exaggerated for the currency portion of the money supply. On a quarter-to-quarter basis, then, there is nothing strange about most of the money supply growth coming in the second half of the year, as reported by Zhao.

The important aspect of Table 6-5, however, is the data for the third quarter of 1984, when the pattern of moderate growth was broken. On a quarter-to-quarter basis, the money supply grew 16 percent instead of the usual 5 or 6 percent. On an annual basis, money growth was 27 percent, rather than the 11-18 percent of the previous several years. This, then, is when China's "overheated" money supply growth really began, in the third quarter of 1984, not at the end of the year, and certainly not as late as December. It is not surprising that monthly output data also show acceleration in industrial growth beginning in July of 1984, coinciding with the increase in the money supply. (For details of China's monthly industrial growth, see Chapter 3, Industry.)

POLICY

Reforming China's financial system encompasses changing investment financing methods and restructuring the state budget. To make better use of China's investment funds and material resources, banks are establishing interest rates, reserve requirements, and borrower qualification measures that will slow the rapid growth of loans and better direct resources to their most productive uses. In addition, the central bank is establishing overall monetary targets that will curb excessive investment and absorb excess currency. State fiscal policy is changing as the 1985 draft budget emphasizes enterprise tax revenue and investment expenditure. During the Seventh Five Year Plan, the state budget will once again function as a catalyst that will drive economic development.

China's method of financing investment and enterprise operations is shifting from state grants to bank loans bearing interest. The old People's Bank of China was largely responsible for disbursing state funds and collecting enterprise revenues. There was little, if any, judgement required, there was nothing equivalent to serious project or loan evaluation, and the influence of local economic and political leaders was very strong. With the reform of banking institutions and goals, the old influence of local forces seems to have remained, resulting in 1984 loans serving local interests rather than overall national monetary targets. This balance of power seems now to be shifting in favor of central control.

Chen Muhua has recently stressed that the People's Bank will set currency targets and credit quotas for other financial institutions and regions in an effort to curb the excessive construction investment that threatens to overheat the economy. The Bank will raise interest rates by up to 3 percentage points on loans for fixed asset investment to be undertaken in urban areas and on loans to rural enterprises for the purchase of production equipment. Stricter control will be placed on loans to urban industries and commercial businesses. Significant reserves will be held by the central bank to prevent the unauthorized issuing of loans by the specialized banks and local bank branches. The People's Bank will limit loans to enterprises with poor economic justification while encouraging those which could earn foreign exchange, and it will not lend to enterprises which spend profits and rely on bank aid for operating capital. The Bank will also cease lending to rural industries while continuing to lend in rural areas for the production and purchase of farm produce to be marketed commercially, refuse to approve loans for investment outside the state plan or beyond state quotas, cut expenditures for sending delegations abroad, and limit payroll increases until the 1985 wage reform is in place. The People's Bank will also ensure that loans from rural credit cooperatives to rural businesses will be granted according to state economic plans.

These more general policies have accompanied various steps to absorb the 1984 money supply increases: large imports of consumer goods have been allowed, stockpiled gold has been sold to jewelers, savings account interest rates were raised twice in the first six months of 1985 advance orders and payments for expensive out-of-stock items have been accepted, and increased production of light manufactures has been encouraged. These efforts have been by and large successful. To prevent another currency surge during the last four months of 1985 when the majority of agricultural payments are made, the People's Bank has instructed agricultural banks to reduce cash payments to farmers by substituting bank transfer checks and bank drafts that supply and marketing departments will then be obliged to accept.

The People's Bank has also indicated that the payment of wages and bonuses will be brought under stricter supervision and control. When it was announced in late 1984 that 1985 wage increases would be tied to the 1984 wage level, enterprises rushed to raise wages and issue bonuses toward the end of 1984. Their actions led to the issuance of excess currency which is still being absorbed in the second half of 1985. To prevent another unauthorized issuance of wages and bonuses, the People's Bank now requires every business to open special payroll accounts so that the payment of wages can be monitored. This new wage payment system will also allow the Bank to control bonus payments and to determine bonus tax liabilities.

Chen Muhua and other officials have been careful to emphasize that they are ready to be flexible in the application of their new principles, and that above all, interest rates and bank lending should become the main levers for influencing investment and production plans.

The People's Construction Bank of China has also tightened control over loans for capital construction as part of the nation's effort to rein in the expansion of credit and currency that began in the second half of 1984. In an effort to reverse the run on reserves that resulted from a record increase in loans, the Construction Bank, in May, began to tighten control of credit and to encourage its clients to save. The head office has launched a nationwide inspection of banking methods, to be undertaken during the last five months of 1985. The Construction Bank will severely punish those responsible for any irregularities in the granting of bank loans or for other violations of financial discipline.

Provincial and local banks are examining lending practices in order to prevent unauthorized loans and usury. The Hunan provincial agricultural bank decided in June to limit monthly interest rates on loans to agricultural cooperatives and households in difficulty. This action was taken in response to reports that monthly interest rates had reached 15 percent and that such high rates were harming the peasants. The monthly interest rate on loans to agricultural collectives for commodity production, floating capital, purchases of high-grade consumer goods, and building materials must now be between 0.6 percent and 0.96 percent. The monthly interest rate on loans to households in difficulty for the purchase of grain rations has been fixed at 0.66 percent.

The Ministry of Finance published its draft budget for 1985 in March and a superficial study shows it to be extremely conservative. In fact, however, definitional shifts within budget categories make simple comparisons impossible. Using definitions comparable to those for 1984, the growth in revenues and expenditures is much higher than it seems, although still somewhat low. As shown in Table 6-1 above, the 1985 draft budget calls for a mere 5 percent growth in revenues and 3 percent growth in expenditures. This seems unrealistically low when compared to the 17 percent increase in 1984 and the growth so far in 1985. Actual growth in revenues and outlays in the first half of 1985 has been 26 percent and 15 percent, respectively, over the first half of 1984. Nevertheless, the state finance minister announced in his July report that China has to strictly control expenditures in an effort to eliminate the planned 1985 budget deficit of 3 billion yuan by the end of the year.

The 1984 and 1985 budgets represent such a rapid restructuring that comparison of the two years is difficult. The most dramatic changes result from the implementation of Phase Two of China's tax and enterprise management reforms, effective October 1, 1984. With Phase Two, virtually all direct payment of revenues to the state is ended and replaced with a profit tax. What were revenue remittances are now to be tax remittances. The losses subsidized by the state budget remain, however, and are no longer hidden within a net revenue total.

One important change, which especially camouflages 1985 budget growth, ends enterprise remittance of depreciation charges to the state. Enterprises can now retain these funds for their own use. To counterbalance this shift, state budget expenditures for renovating enterprises and upgrading their technologies are to be cut by half. The same projects are now to be financed by the enterprises themselves with the moneys they save by keeping the depreciation charges. In other words, formal revenues and expenditures have both been reduced, but the effect on the enterprise is neutral.

Shifts and redefinitions such as these contribute to the appearance of unrealistically slow budget growth planned for 1985. The Ministry of Finance calculates that if there were no definitional changes, revenue growth would be 10 percent rather than 5 percent. Even 10 percent, however, is low compared to 17 percent in 1984 and the 26 percent revenue growth reported for in the first half of 1985.

PROBLEMS

The rapid expansion of credit used to finance too much investment in capital construction, excess currency still in circulation, low bank reserves, a possible build-up of unsalable inventories requiring huge enterprise subsidies, and tax evasion are problems that the financial authorities were still facing in the first half of 1985. The major underlying problem, however, is the close traditional relationship between local bank leadership and other local economic authorities in various locations. This power relationship was, in part, responsible for the recent rapid growth in loans and it is also the main target of the banking reforms under Chen Muhua. Because this local, decentralized authority over loan discipline is, in reality, not much discipline at all, it is perhaps the main problem facing the reformers and the central bank leadership.

The state finance minister indicated in July that the problem of runaway capital construction investment, especially that undertaken by non-state sources, is one that will have to be solved during the second half of 1985. He also stated that the government had been unable to control the excessive increases in capital construction investment and consumption funds that began late in 1984 and continued unabated for the first half of 1985. The 1984 winter credit and currency boom, which tended to upset the domestic market, has been attributed to the arbitrary granting of large loans by the specialized banks. Loans for construction increased by about 130 percent in 1984. Over 27,400 capital construction projects were started in the first four months of 1985 alone, signaling the largest construction boom in 35 years. Total investment in capital construction by state-owned industries and government departments reached 14.2 billion yuan from January to April, representing a 36 percent increase over the same period in 1984. However, of all investment during that period, 30 percent was financed by individual and other sources.

The continued arbitrary granting of loans for investment since January has drained bank reserves. Higher wages and bonuses paid by the state have also contributed to the depletion. Even though central authorities insisted that bank reserves be increased, the People's Construction Bank reported that most of its provincial branches did not meet their targets for boosting reserves during the first half of 1985 because local construction units increased their demands for loans.

Although state budget trends in 1984 and early data for 1985 are very promising, there are three possible sources of difficulty for the 1985 budget. The first is collusion between local officials and local enterprises to avoid payment of taxes which would result in reduced state revenue. The second is a repeat of the unsalable inventory build-ups of 1979, which would result in losses to commercial enterprises and a consequent sharp reduction in revenues. The third is the uncertainty about the seasonality of budget outlays. The government is still giving assurances that it will purchase crop production even if this autumn's rural output is very large. This could require increased outlays this fall which could, in turn, create a small budget deficit for 1985. A deficit, however, would not necessarily be a very serious problem because China has dealt with slight deficits for many years. Although seasonality may account for the overall surplus in the first half of 1985, it cannot account for the 25.9 percent revenue increase over the same period in 1984. Nevertheless, if there is a concern about the 1985 budget, with all its changes and promise, it is the threat of unsalable inventories and unrecoverable commercial enterprise losses.

There are numerous accounts of serious tax evasion in China, many resulting from the close relationship between local political leaders and the heads of industrial enterprises. Enterprises have been falsely put in a lower enterprise category to avoid higher taxes, and in the most extreme case, some provinces have refused to remit some new taxes, such as the bonus tax. Sichuan, whose population of 100 million people makes it China's most populous province, is one example of such refusal. The next two most populous provinces, Henan and Shandong, both remitted substantially less bonus tax per capita than the national average. Loopholes in tax collection methods are also part of the tax evasion problem. In Hebei province, unpaid taxes totaled over 200 million yuan from 1980 to 1984. Provincial officials have stated that tax evasion has affected state revenue, hindered the modernization program, and corrupted Party style and cadres. Although problems of tax evasion are common in the Chinese press, so are reports of success in correcting abuses. The importance of the issue is probably greater as a sign of tension between Peking and localities than as a serious immediate cause of revenue failure.

Revenue failure could be much more precipitous if the current industrial expansion turns out to be based on production and procurement of large amounts of unsalable items. Just as for agriculture, where relative peasant autonomy coupled with guaranteed state procurement at high prices resulted in a serious surplus of coarse grains, so in industry, the combination of increased enterprise independence and guaranteed state procurement could result in very large stockpiles of poor quality industrial products held by state commercial units. With outlays but no corresponding revenues, these units would suffer directly. So far in 1985 there is no sign that this is the case.

It is not likely that 1985's government agricultural obligations will cause a budget deficit even though the state is guaranteeing that it will purchase crop production. Another year of bumper crops is unlikely because weather conditions in 1985 do not seem to have been as favorable as 1984's. The new contract purchase system in agriculture has helped limit government obligations because it caps the price that the state will pay for products delivered over the contractual agreement and it allows much of the surplus output to be sold in private markets as long as the price does not fall precipitously.

PROSPECTS

China's authorities are strengthening their control over banking practices and are using the revamped state budget as a catalyst to drive economic development in the seventh five-year plan. Increased state revenue will be used for investment in state projects, and interest rates and reserve requirements will be used to govern investment in non-state projects. Official fiscal and financial policy will be flexible in the face of seasonal monetary flows and with such rapid changes as price and enterprise management reforms. At the same time, the overall fiscal and financial system will become increasingly decentralized in other ways as the state relies on interest rates and taxes to support enterprise autonomy and to direct investment according to State economic plans.

At the same time that reforms are decentralizing many economic decisions in China, the central government is reasserting the state budget's traditionally strong influence over the economy's development program. Statistical results for 1984 and early 1985 show that China's state budget, bolstered by the revenue-earning power of new state taxes, has reassumed its catalytic influence on investment and industrial growth. These rapidly increased outlays, together with rapid surges in the money supply, seem to have converted managerial reforms into 1985's extremely fast growth.

The strong seasonality that exists in the money supply and in lending patterns because both are keyed to agricultural purchases could weaken as the importance of the new purchase quota system grows. Under the new system, the price the government pays for above-quota agricultural output is capped and therefore the seasonal outlay for such purchases is limited. However, seasonality in expenditures will continue to be of importance due to industrial purchases which surge in plan fulfillment months.

The new draft budget confirms that 1985 is to be a year of continued radical change in state revenues. The shift to taxation will virtually eliminate enterprise profit transfers to the state, while leaving a large negative revenue item for state subsidies to ailing industries. Because of shifting definitions, the draft budget is not as conservative as it seems, but its expansion is still very slow in the context of actual results in 1984 and 1985. The state budget surplus in the first six months of 1985 was the highest recorded in recent years as revenues exceeded expenditures by 11.6 billion yuan. Annual growth in both revenues and expenditures was planned to be less than 5 percent but revenues during the first six months of 1985 were 26 percent higher than in the same period in 1984 and expenditures were 15 percent higher. For the years 1986 to 1990, the state has set a total revenue target of 900 billion yuan, which requires an average annual increase in revenues of only 1.9 percent. Given the double digit growth experienced from 1983 through the first half of 1985, the revenue target appears conservative, even with budget redefinitions. Even though the budgetary goal announced this summer by the state finance minister called for restraining expenditures during the second half of 1985, the finance minister also indicated that more funds would be allocated in 1985 to ensure the reform of the wage and price systems.

Enterprise subsidies are currently reported as negative state revenue. If China succeeds in carrying out the anticipated tax and profit remittance reforms, revenue sources will be painfully visible to policy-makers and policy critics alike. The subsidies may then be reported as expenditures to reflect their true nature in the state budget.

To encourage exports, the State is likely to soon shift some of the tax burden from enterprises to domestic consumers. By reducing or eliminating the enterprise profit tax and imposing an excise tax on high-priced consumer goods or luxury items while at the same time lowering industrial prices, enterprises will find it in their best interests to export. Increased exports will help to offset the current high demand for expensive imports which has resulted in a trade deficit of 4.6 billion dollars in the first half of 1985. Demand for imports will continue to be high as world prices fall and Chinese prices rise. As a result, there will be pressure for further devaluation of the Chinese yuan, which could push the exchange rate as high as 3.5 or 4 yuan per dollar by mid-1986.

Money supply growth will continue to exceed real output growth. As commercialization and the incidence of money transactions spread to more and more areas of economic activity, more money will be needed for the same level of real economic output. By all accounts, because of the increasingly specialized peasant operations and more independent industrial enterprise management in particular, China's economy is commercializing rapidly. To ensure steady growth of the money supply, the state will regain tight control by establishing reserve requirements. Banking practices are being examined in an attempt to curb excessive currency growth.

Inflation caused by the rapid money supply increase will be held in check by government price-monitoring bureaucracy, increased production and importation of goods, and the monetarization of more aspects of China's economy. Some inflation may be desirable because it could be an effective way of changing relative prices during the price reforms. Correcting China's irrational price system requires changing relative prices. This can be accomplished by raising some prices, reducing others, or by a combination of price increases and decreases. Politically and administratively, it is easier to make some prices rise than to get others to fall. As a result, there will probably need to be many more price increases than decreases, resulting in overall inflation and requiring liquidity in the form of an increased money supply to finance the process. The relatively large money supply increases in 1984 and 1985 may indeed serve a valuable purpose.

CHAPTER SEVEN - Trade and Payments

EXECUTIVE SUMMARY

TRENDS

- * After three years of trade surpluses and reserve accumulation, China's 1984-85 imports surged while exports stagnated.
- * By the end of August, China's 1985 trade deficit was 6.3 billion dollars, due to more than 50 percent growth in imports.
- * The import surge is concentrated in investment goods and is closely related to the introduction of urban reforms.
- * The deficit with Japan is three-fourths of the total deficit and is concentrated in markets with strong prospects.
- * Foreign reserves fell 3 billion dollars in the first quarter of 1985, but less than a half billion in the second.

POLICY

- * By March 1985 China cut consumer imports dramatically, but vowed to honor all investment good import contracts.
- * To deal with sagging exports, China has begun a gradual devaluation of the yuan and recentralized some controls.
- * China's overall strategy is to use its limited foreign reserves to import technology and critically short materials.

PROBLEMS

- * China's major trade problem is one of internal discipline as managerial decentralization and price responsiveness spread.
- * High "luxury" pricing for domestic manufactures and an overvalued currency have made exporting unattractive.

PROSPECTS

- * The current devaluation will continue until the yuan is 3.5 or 4.0 to the dollar some time in 1986.
- * After a swing to control imports in 1985-86, China will borrow only modestly, constraining imports with export earnings.

Table 7-1
CHINA'S FOB TRADE BALANCE, 1975-1985
(Billion US $)

	Exports FOB	Imports CIF	Balance	Exports FOB	Imports FOB	Balance
1975	7.26	7.49	-.23	7.26	6.67	.59
1976	6.86	6.58	.28	6.86	5.86	1.00
1977	7.59	7.21	.38	7.59	6.34	1.25
1978	9.75	10.89	-1.14	9.75	9.58	.17
1979	13.66	15.67	-2.01	13.66	13.95	-.29
1980	18.10	19.94	-1.85	18.10	17.75	.35
1981	22.01	22.01	-.01	22.01	19.37	2.63
1982	21.13	19.29	1.83	21.13	16.88	4.25
1983	20.71	21.39	-.68	20.71	18.72	1.99
1984	23.91	26.74	-3.77	23.91	23.89	.01
1985*	16.44	25.30	-8.86	16.44	22.77	-6.33

* NOTE: 1985 is for the first 8 months only.
SOURCES: 1975-1980 from Ministry of Foreign Trade, 1980-1982 and 1985 on Official Chinese customs basis, 1982-1984 on official payments basis. (J5AI01.D5J)

TRENDS

As a result of the open-door policy following Mao's death, China's foreign trade turnover nearly quadrupled between 1975 and 1984 and is growing even more rapidly in 1985. China's self-imposed commercial isolation is apparently over. The trade pattern during this period of rapid growth has not been even. The trade balances in Table 7-1 show a deficit in 1979, strong surpluses in 1982-83, and the reappearance of a deficit in 1985. The more recent trade deficit is the result of rapidly growing imports of investment goods while exports in general have stagnated. The import boom beginning in late 1984 has mostly benefitted Japan, which, in addition to substantial steel exports to China, has out-competed the United States and West Germany for China's large and growing purchases of machinery, electronic equipment and vehicles. Trade developments are also closely related to China's foreign exchange system. 1985 has already had both a dramatic fall in foreign exchange reserves in the first quarter and China's first currency devaluation in five years in the third quarter. In addition some reports indicate that borrowing was also high in the first half of 1985.

Table 7-2
CHINA'S BALANCE OF PAYMENTS, 1980-85
(Million US $)

	1980	1981	1982	1983	1984	1985 I-II
CURRENT ACCOUNT						
Commodity Trade Exports	18099	22007	21125	20707	23905	11990
Commodity Trade Imports (-)	-17750	-19372	-16876	-18717	-23891	-16560
Commodity Trade Balance	349	2635	4249	1990	14	-4570
Services Income	2409	3130	3604	4028	4819	
Services Expenses (-)	-2703	-3333	-2665	-2289	-3245	
Total Net Services	-294	-203	939	1739	1574	
Net Private Transfer Receipts	640	464	530	436	305	
Net Government Transfer Receipts	-70	108	-44	75	137	
Total Net Transfer Receipts	570	572	486	511	442	
Invisibles Receipts (Net)	276	369	1425	2250	2016	1000
Current Account Balance	625	3004	5674	4240	2030	-3570
CAPITAL ACCOUNT						
Long-term Lending	956	1736	2923	2653	4241	
Long-term Borrowing (-)	-2716	-1987	-3312	-2702	-4128	
Long-Term Lending (Net)	-1760	-251	-389	-49	113	
Short-term Lending	236	1190	295	334	1113	
Short-term Borrowing (-)	-312	-231	-244	-59	-223	
Short-term Lending (Net)	-76	959	51	275	890	
Total Lending (Net)	-1836	708	-338	226	1003	-2
Increase in Reserves	108	2511	6291	3648	95	-3568
Capital Account Balance	-1728	3219	5953	3874	1098	-3570
Errors and Ommissions	2353	-215	-279	366	932	0
FOREIGN EXCHANGE RESERVES	1875	4386	10677	14325	14420	10852

* NOTE: Foreign Exchange Reserves prior to 1984 are calculated backwards based on official change in reserves published for 1982-1984.

SOURCES: Official data, (1982-1984), IMF estimates, RCR estimates. (J5BX06a.D5k)

The periods of commodity trade surplus in the early 1980s helped China build foreign exchange reserves up to a level of 14.4 billion dollars by the end of 1984. The fall in first quarter 1985 brought them to 11.3 billion dollars, roughly the same very strong level of 1982-83. But the internal distribution of the reserves, with more in provincial hands, could explain reports of severe foreign exchange shortages in Peking. When foreign exchange reserves were quite high, as in 1983 and 1984, import policy was relatively open, and foreign exchange flowed more freely. Now that the supply of foreign exchange is more taut, the trend is towards more restricted access to foreign exchange and the re-establishment of central control over reserves. For details on China's balance of payments see Table 7-2. The reserve level stabilized in the second quarter of 1985, falling only 400 million dollars, to 10.85 billion, after falling 3 billion in the first quarter. However, the reserves held by the state fell approximately 2 billion dollars in the second quarter and constituted less than one-half of the nation's reserves at the end of June, at 5.37 billion dollars.

Historical data at the SITC 1-digit level of aggregation in Table 7-3 indicate the major long-term trends in the makeup of China's growing commodity trade. The temporary increases of food and raw materials in 1980-81, (categories 1 and 3,) were associated with the increased need for grain and cotton due to the very bad drought and flood conditions in China at that time. In contrast to the short term fluctuations, exports of mineral fuels and light manufactures, primarily crude oil and apparel, have grown consistently throughout the period, while imports of chemicals, metals and especially machinery have increased rapidly.

Table 7-3
ANNUAL TRADE BALANCE BY SITC ONE DIGIT TRADE CATEGORIES
(Million Current Dollars)

	(0) Food and Animals	(1) Beverages & Tobacco	(2) Crude Materials	(3) Mineral Fuels	(4) Animal Vegetable Fats	(5) Chemicals	(6) Materials and Metals	(7) Machinery & Transport	(8) Light Manufactures	(9) Other Commodities	Total
1975	784	59	-13	1,035	10	-339	-965	-1,605	799	3	-230
1976	813	60	127	872	11	-228	-680	-1,560	848	20	280
1977	316	59	-189	1,076	-106	-441	-678	-735	1,088	-10	380
1978	362	57	-401	1,399	-60	-600	-1,759	-1,441	1,310	-8	-1,140
1979	113	63	-511	2,593	-106	-511	-1,827	-3,496	1,727	-55	-2,010
1980	-537	35	-1,784	4,272	-106	-514	-552	-4,503	2,500	-91	-1,280
1981	-685	-148	-2,056	5,012	-13	-1,260	622	-4,693	3,086	-20	-155
1982	-1,354	-36	-1,395	5,029	-32	-1,760	322	-1,944	3,142	602	2,573
1983	-275	57	-572	4,355	34	-1,934	-1,940	-2,772	3,009	616	579
1984	891	-13	-159	5,626	60	-2,782	-2,263	-5,807	3,338	-611	-1,720

NOTE: Because of the lack of conversion standards at 1-digit SITC levels, imports in this table are CIF.

SOURCES: 1975-1980 data from RCR Trade Databank, Corrected from partner country data in CIA "International Trade Statistics," various editions. 1981-1984 balances from Chinese "Customs Statistics" (J5AI35.D5J).

Switching from annual to quarterly data, the major recent development is the deficit in commodity trade. Overall, China's first-half FOB deficit was 4.6 billion dollars, in spite of the near-recovery of exports after their first quarter dip. As for all of 1984, data for the first quarter of 1985 show that trade was dominated by oil and steel. The deficit with Japan accounts for a full three-quarters of the total deficit, and within Japan's trade, machinery and equipment again account for more than the total shortfall. China's net imports from Japan far overshadow those from the United States. Furthermore, because they are concentrated in investment goods such as electrical machinery, vehicles and telecommunications, Japan's China-bound exports are expected to enjoy contiued growth.

Official trade statistics for the first half of 1985 reveal the rapid growth in China's trade deficit over the last three quarters. Revised data for the first half of 1985, in Table 7-4 below, emphasize the difference between first- and second-quarter deficits. The first quarter deficit was due more to weakening exports than growth in imports over end 1984. This led observers to believe that China was tightening control over imports after unruly late 1984 growth. However, as Table 7-4 clearly shows, the even larger trade deficit in second quarter 1985 is due solely to import growth of over a billion and a half dollars, while exports actually recovered. When imports held steady in the first quarter of 1985, rather than falling to match the usual first quarter dip in exports, and grew another 16 percent from first to second quarter, the result was a 6-month trade deficit of almost 4.6 billion dollars. China's quarterly trade pattern in Table 7-4, below, shows imports in both the official CIF form and the more accurate FOB form for balance of payments. (CIF imports double-count invisibles such as shipping and insurance, much of which China pays to itself.)

Table 7-4
QUARTERLY TRADE BALANCE, 1981-1985'II
(Billion US $)

		Dollar Exports FOB	Dollar Imports CIF	FOB-CIF Trade Balance	Dollar Exports FOB	Dollar Imports FOB	FOB-FOB Trade Balance
1982	I	5.31	4.52	.79	5.31	3.95	1.35
	II	5.56	5.21	.35	5.56	4.56	1.00
	III	5.51	4.57	.94	5.51	3.99	1.51
	IV	5.98	5.00	.98	5.98	4.37	1.61
1983	I	4.50	4.57	-.07	4.50	4.00	.51
	II	5.52	4.93	.59	5.52	4.32	1.20
	III	5.99	5.48	.51	5.99	4.80	1.19
	IV	6.21	6.40	-.20	6.21	5.60	.60
1984	I	5.57	5.32	.25	5.57	4.85	.72
	II	6.30	5.79	.51	6.30	5.27	1.02
	III	6.31	6.49	-.18	6.31	5.91	.40
	IV	6.71	8.64	-1.93	6.71	7.87	-1.16
1985	I	5.55	8.37	-2.82	5.55	7.50	-1.98
	II	6.44	10.03	-3.59	6.44	9.03	-2.59

SOURCES: Official Chinese Customs Statistics, various editions. (J5BR10B.D5H)

Popularly billed as a boom in consumer goods, China's recent import expansion in fact is still very strong in investment goods. That component closely parallels the progress of 1984-85's urban reforms. In 1984, the import surge was concentrated in machinery and transportation equipment, SITC 7, and metals under SITC 6, see Table 7-5, below. In 1985, heavy industry and investment goods continued to increase but there were also large-scale imports of consumer durables. For details on imports by commodity, see Table 7-6, below. Trade data by SITC one-digit level of classification in Table 7-5, above, show the increase was so dramatic that net imports of machinery and transport equipment in first quarter 1985 were only slightly less than net imports for the first three quarters of 1984. In contrast, net earnings from mineral fuel exports, mostly petroleum and traditionally China's greatest foreign exchange earner, hardly grew at all.

The slow growth in petroleum exports earnings since early 1984, in spite of the nearly 35 percent increase in exports by weight, confirms China's strategy of rapidly expanding fuel export volume to maintain earnings in the face of dramatically lower average prices. As for the remaining major foreign exchange earner, SITC Category 8 (Light Manufactures), net earnings, which had remained stable for the last four years, fell sharply in first quarter 1985. In addition, China spends nearly half a billion dollars per quarter, net, on fertilizer imports. Within the largest net import category, SITC 7, electrical equipment of various sorts shares importance with vehicles and transport equipment. The rapid growth in the volume of imports of vehicles and equipment sets shown in the next table, correspond to the increases in SITC 7 in Table 7-5.

Table 7-5
QUARTERLY SITC 1-DIGIT NET EXPORTS, 1982-1985'I
(Million US $)

		(0) Food & Animals	(1) Beverages & Tobacco	(2) Crude Materials	(3) Mineral Fuels	(4) Animal Vegetable Fats	(5) Chemicals	(6) Materials & Metals	(7) Machinery & Transport	(8) Light Manufactures	(9) Other Commodities	Total
1982	I	-131	-35	-347	1,111	-16	-424	283	-418	653	82	759
	II	-503	-24	-545	1,344	-8	-488	208	-582	836	91	329
	III	-458	7	-224	1,272	-11	-387	116	-441	818	217	908
	IV	-175	16	-221	1,302	5	-422	-194	-441	844	236	951
1983	I	-233	14	-145	1,042	6	-517	-156	-681	604	15	-51
	II	-279	11	-21	1,074	6	-462	-243	-592	761	333	589
	III	-15	16	-124	1,364	4	-378	-580	-730	858	92	507
	IV	260	16	-276	1,079	19	-573	-935	-758	791	181	-197
1984	I	73	6	-53	1,160	2	-587	-411	-745	794	12	251
	II	209	11	167	1,460	21	-634	-305	-1,060	845	-210	506
	III	233	10	-27	1,458	27	-685	-512	-1,271	867	-280	-180
	IV	340	-34	-208	1,508	9	-836	-944	-2,476	828	-118	-1,931
1985	I	276	-19	-59	1,591	-5	-850	-1,447	-2,854	327	220	-2,820

NOTE: A negative sign represents net imports. Imports are CIF, Exports are FOB.
SOURCES: Official Chinese customs statistics. (J5BR09.D5H)

Table 7-6
VOLUME OF MAJOR IMPORT COMMODITIES BY QUARTER

		Total Cereals	Wheat	Synthetic Fibers: Raw	Synthetic Fibers: Spun	Chemical Fertilizers	Polyethylene	Iron and Steel	Timber	Equipment Sets	Motor Vehicles
1982	I	3,500	2,940	104.9	37.7	1,342	77.9	654	630	362	3.9
	II	4,320	3,430	61.8	35.3	1,626	90.9	843	1,370	357	4.5
	III	4,250	4,020	34.6	16.5	1,472	113.6	958	1,280	227	2.9
	IV	4,080	3,410	37.6	7.9	1,620	139.2	1,317	1,340	182	4.8
1983	I	3,510	2,570	27.5	6.3	1,742	115.0	1,523	1,170	139	3.2
	II	3,800	2,840	25.0	6.8	2,228	59.3	2,072	1,330	179	4.7
	III	3,480	3,130	22.7	8.6	1,737	99.6	2,646	1,680	189	6.7
	IV	2,730	2,570	58.3	28.4	2,289	152.9	3,385	2,130	146	10.6
1984	I	2,950	2,830	49.8	37.7	1,943	139.1	2,699	1,850	129	11.1
	II	2,340	2,230	56.0	36.8	2,036	165.9	2,706	1,760	207	11.8
	III	2,390	2,220	68.0	39.1	2,518	186.2	3,110	2,070	173	63.0
	IV	2,730	2,590	96.2	60.2	2,719	204.4	3,775	2,240	215	64.0
1985	I	1,940	1,750	122.0	46.7	2,458	148.5	3,951	1,710	223	79.5
	II	1,422	1,260	109.5	60.7	2,246	N/A	4,703	1,396	461	102.6

* NOTE: Timber is in thousand cubic meters, equipment sets are in million US $, Motor vehicles are in thousand units, all others are in thousand tons.
SOURCES: Chinese Official Customs statistics. (J5BR13.D5H)

The data on imports by commodity in Table 7-6, above, follow the more comprehensive trends in the SITC category data. They show just how strong growth in investment goods including machinery, transport equipment, chemicals, mostly fertilizer, and metals has been. For metals and machinery, 1984 imports were substantially higher than during the previous peaks in the 1978-81 years of heavy foreign buying. The very large increase in chemical imports, on the other hand, has no recent historical precedent. Imports of investment goods increased rapidly with the introduction of urban reforms as is well documented in the data on imports of metals and computers by month in Table 7-7. Clearly consumer imports have also been significant, particularly since the third quarter 1984, as shown in Table 7-7 below. Televisions and combination radio-tape recorders in the past have followed a somewhat seasonal pattern, growing to match farm cash income at year-end. In 1984-85, however, the growth has been sustained well into 1985.

Table 7-7
MONTHLY IMPORTS OF MAJOR COMMODITIES, 1984-JUNE 1985

		Synthetic Fibres	Iron Ore	Steel	Copper	Alu-minum	Zinc	Calcu-laters	Vehi-cles	Tele-visions	Radio-Recorders
1984	Jan	15.4	307	805	22	16	14	101	3.5	171	72
	Feb	11.5	231	902	24	5	5	211	7.0	40	32
	Mar	22.6	372	828	14	28	7	102	4.6	63	32
	Apr	16.8	179	877	25	17	9	158	4.0	105	26
	May	19.9	255	901	11	17	8	107	3.0	98	42
	Jun	19.6	597	861	5	29	5	152	4.3	53	35
	Jul	19.0	333	1001	17	32	15	80	5.3	117	39
	Aug	26.3	94	1065	15	28	14	221	5.7	106	48
	Sep	22.6	1409	1042	13	28	46	565	9.0	69	48
	Oct	24.1	671	1294	45	19	20	978	10.4	194	65
	Nov	36.9	544	1235	31	13	34	555	13.1	226	137
	Dec	34.0	728	1123	41	22	32	1693	32.8	274	90
1985	Jan	32.8	346	1094	52	11	23	1673	26.2	300	102
	Feb	51.3	458	1399	26	30	20	2176	16.1	387	125
	Mar	37.9	613	1457	33	47	34	2032	37.2	365	120
	Apr	37.7	799	1318	34	28	30	2427	35.6	416	120
	May	37.7	792	1605	46	39	24	2062	28.9	424	127
	Jun	41.9	779	1764	26	33	17	3202	37.6	387	208

UNITS: Metals and fibers in thousand tons, others in thousand units.
SOURCES: Official data, not corrected for differences in days/month. (J5CM04.D5I)

In contrast to the dramatic growth in imports, data on exports by volume in Table 7-8 show no sign of a widespread surge. Cotton yarn and fabric exports have fallen in 1985 despite bumper cotton yields, as have the other textile categories covered. Cereal exports have increased, as a result of the good harvests of the past several years. Petroleum exports have gained in volume while world prices have fallen. More discussion of petroleum exports follows in the Policy section of this chapter. (See also Chapter 4, Energy.)

Table 7-8
VOLUME OF MAJOR EXPORT COMMODITIES BY QUARTER

		Total Cereals	Canned Food	Coal	Crude Pet-roleum	Refined Pet-roleum	Edible Oil Seeds	Cotton Yarn	Cotton Fabric	Poly-ester Fabric	Gar-ments
1981	I	220	85.5	1,500	2,640	920	105.0	10.0	289	92.7	78
	II	240	104.9	1,900	3,370	1,090	127.1	12.6	332	115.9	91
	III	160	91.4	1,720	3,920	1,380	44.5	10.9	320	114.0	105
	IV	250	97.7	1,820	3,930	1,280	29.3	14.1	336	147.5	105
1982	I	160	102.2	1,480	3,390	1,250	47.7	10.3	309	128.5	87
	II	220	85.7	1,690	3,880	1,140	59.9	12.1	277	133.2	101
	III	180	111.0	1,880	3,770	1,200	38.7	10.1	256	121.3	96
	IV	240	109.7	1,670	3,640	1,320	49.9	16.2	348	174.2	120
1983	I	250	97.0	1,500	3,070	1,130	83.7	13.5	294	126.1	100
	II	260	101.5	1,420	3,420	1,320	107.3	21.5	285	146.9	121
	III	270	105.4	2,080	4,630	1,280	87.0	37.8	361	182.9	115
	IV	370	99.7	1,850	3,700	1,180	83.1	41.8	431	207.4	121
1984	I	330	102.1	1,590	4,150	1,280	93.7	42.7	410	178.5	141
	II	640	107.3	1,820	5,590	1,500	111.9	39.8	447	186.2	141
	III	1000	100.9	1,820	5,660	1,550	74.4	39.4	443	163.3	127
	IV	1220	92.2	1,810	6,570	1,370	56.4	45.5	433	192.0	145
1985	I	1810	68.6	1,670	6,480	1,510	117.4	23.5	341	140.2	86
	II	2446	84.9	1,657	7,323	1,497	N/A	33.7	373	N/A	N/A

NOTE: Units are in thousand tons except for fabrics which are in million meters. Garment includes only non knitted.
SOURCES: Chinese Official Customs statistics.

Japan has been the clear winner in China's 1984-85 import sweepstakes, and data in Table 7-9 illustrate the scale of China's increased reliance on her major trading partner, quarter-by-quarter as well as relative to earlier years. By comparison, China's other trading partners seem to have gained only marginally, with the possible exception of Hong Kong. Ministry of Foreign Trade statistics for the first half suggest Hong Kong reversed its traditional role as a net importer from the mainland and Customs statistics for the period have not been released.

Japan's net exports to China have grown from very low levels in 1983 and early 1984 to more than 1.6 billion dollars in the fourth quarter of 1984 and to nearly 5 billion dollars in the first half of 1985. For the United States, net exports in the first half of 1985 remained less than one billion dollars. China's foreign exchange earnings from Hong Kong have fallen substantially in 1985. Ministry of Foreign Trade statistics, apparently based on contracts signed rather than actual goods delivered, even report a deficit for the first half. A large part of Hong Kong's export gain is through trans-shipped goods originating in Japan which, if included, would make the trade deficit with Japan even greater. Hong Kong re-exports of Japanese goods were up 220 percent in the first five months of 1985.

Table 7-9
NET EXPORTS BY PARTNER COUNTRY 1981-1985'II
(Million US Dollars)

	Total	Japan	United States	Canada	West Germany	USSR	Sing-apore	Hong Kong
1981*	439	-349	-671	-218	-75	-8	139	1,008
1982*	1,150	227	-525	-238	-12	-25	134	969
1983 I	300	128	-379	-262	-39	-41	139	838
II	982	-216	-219	-303	-6	-33	95	1,004
III	948	-435	56	-300	-70	12	98	1,084
IV	315	-542	-281	-357	-54	-61	129	1,154
1984 I	671	-197	-296	-185	-58	-57	173	999
II	969	-460	-17	-161	-93	35	196	1,050
III	339	-697	-197	-173	-37	-10	308	917
IV	-1,240	-1,647	-661	-190	-121	-57	391	789
1985 I	-2,151	-1,521	-554	-261	-190	-12	371	374
II	-2,787	-2,204	-583	-157	-266	-1[illegible]	482	273 **

NOTES: *Average Quarterly Net Exports. **Includes Macao with Hong Kong. Exports FOB, Imports converted to FOB using individual country transformation rates, which are meant to approximate customs totals as opposed to estimates of trade on a payments basis as presented in Tables 7-2 and 7-4.
SOURCES: Official Chinese customs statistics. (J5bx11a.D5H).

The deficit with Japan accounts for a full three-quarters of the total first-half 1985 deficit, and within Japan's trade, machinery and equipment again account for more than the total shortfall. China's first quarter 1985 trade preference for Japan is shown very clearly in Table 7-10, below, which gives one-digit SITC trade with each of China's major trading partners for both the average 1984 quarter and first quarter 1985 net exports. The first column to the left shows the overall pattern clearly. Net imports of Machinery and Transport (SITC 7) more than account for the total trade deficit.

It is particularly interesting to see the growing degree to which Japan's trade position with China overshadows that of the United States. Japan's net earnings from Machinery and Transport sales averaged over three times those of the United States in 1984 and in the first quarter of 1985 were over four times the United States'. When it is remembered that a significant portion of Hong Kong's net exports to China also originated in Japan, Japan's dominance of SITC 7 is even more impressive. In most categories Japan's net exports are more than twice those of the United States, and in the important telecommunications market, United States sales are dwarfed by Japan's.

This contrast in trade patterns between Japan and North America reflects a more long-run difference. Data on China's imports in Table 7-9, above, show that Japan's sales fell much more sharply in the 1982 cut back than those of the U.S. and Canada, just as they are surging more rapidly now, as import restrictions have been eased.

Examination of net exports by partner country at the one-digit level reveals where most of the competition is. Japan's strengths are in metals and machinery, while North America has done well in foods, timber, and chemicals. The strength of Japan's trade position, however, is emphasized by data on net exports at the two-digit level of SITC detail. (For details see Table 7-11.) Overall, China makes money on mineral fuels and light manufactures (mostly apparel) and spends it on chemicals, metals, and machinery. The materials, metals and machinery come overwhelmingly from Japan, while the U.S. and Canada have some advantage in supplying chemicals. For food and crude materials, Japan does not really compete with North American suppliers. There is, however, strong competition in SITC category 7 (machinery and transport equipment), and Table 10 shows clearly how much more successful Japan has been in making money from this class of commodities. Japanese net exports were more than triple those from the U.S. and far greater than those from any of China's other trading partners. In general, competition for sales to China is concentrated in SITC categories 5, 6, and 7 (chemicals, materials & metals, machinery & transport). Canada, West Germany, and even the USSR show significant net exports to China for these goods.

Table 7-10
1984 AVERAGE QUARTERLY NET EXPORTS
(Million US $)

SITC Category	Total	Japan	United States	Canada	West Germany	USSR	Singapore	Hong Kong
Total Exports	**-430**	**-805**	**-409**	**-205**	**-127**	**-23**	**274**	**929**
(0) Food & Animals	223	127	-164	-120	24	37	29	279
(1) Beverages & Tobacco	-3	1	-8	0	1	0	2	9
(2) Crude Materials	-40	113	-110	-52	39	22	-6	108
(3) Mineral Fuels	1,406	705	169	0	0	0	188	65
(4) Animal, Vegetable Fat	15	5	0	-1	1	4	0	6
(5) Chemicals	-696	-122	-198	-33	-57	-38	-2	41
(6) Materials & Metals	-566	-678	52	-28	-64	-35	34	438
(7) Machinery & Transport	-1,452	-916	-267	-4	-105	-32	20	-11
(8) Light Manufactures	835	-3	127	32	35	19	11	419
(9) Other Commodities	-153	-37	-10	0	-1	-1	-1	-425
FIRST QUARTER 1985 SITC 1-DIGIT NET EXPORTS BY TRADING PARTNER								
Net Exports	**-2,820**	**-1,521**	**-666**	**-296**	**-250**	**-12**	**369**	**374**
(0) Food & Animals	276	155	-71	-148	16	16	32	265
(1) Beverages & Tobacco	-19	1	-16	0	0		2	0
(2) Crude Materials	-59	87	-132	-62	27	46	-6	96
(3) Mineral Fuels	1,591	846	139		0		335	60
(4) Animal, Vegetable Fats	-5	3	-6	-1	1		-1	2
(5) Chemicals	-850	-129	-275	-30	-54	-36	-10	26
(6) Materials & Metals	-1,447	-834	-14	-80	-83	-40	18	165
(7) Machinery & Transport	-2,854	-1,644	-365	-4	-179	-19	-7	-305
(8) Light Manufactures	327	11	68	28	20	20	5	45
(9) Other Commodities	220	-17	6	0	1	0	1	19

SOURCES: Official Chinese Customs Statistics (J5bx28A.D5G) calculated from FOB exports and CIF imports.

For Singapore and Hong Kong, however, the pattern is markedly different. Hong Kong and Southeast Asia have traditionaly been net foreign exchange earning markets for China, and Table 7-10 above shows that in addition to light manufactures, China provides them with foods, fuels, and semi-finished materials. These patterns are apparent for both the first quarter of 1985 as well as for 1984, presented in Table 7-10, above.

At the two-digit level, Table 7-11 shows how much Japan commanded China's 1984 net imports of electrical machinery, office and data processing equipment, telecommunications systems, and road vehicles. Japan's net earnings from electrical machinery sales were more than double those for West Germany and the United States. In telecommunications equipment and road vehicles, Japan's sales dwarfed those by all other competitors. Only in office and data processing equipment did the United States approach Japan's level of performance. Since these are areas in which continued investment imports can expect to be concentrated, Japan's 1984 strength, which continued into 1985, may have established trade patterns for the near future.

A final trend which has received little attention but is very important to China's overall trade position, is devaluation. September 1985 saw the beginning of a gradual devaluation of the yuan in what appeared to be the first significant deviation in nearly five years from the de-facto exchange rate (internal settlement rate) of 2.8 yuan/dollar. By late October the yuan had been devalued by 10 percent to 3.1 yuan per dollar.

POLICY

China's long term trade policy indicates a strong linkage between her imports and the receptivity of foreign markets to her exports, a policy dictated in part by foreign exchange needs. The recent reforms have relaxed the linkage somewhat by decentralizing trade and borrowing decisions. But it is the return of import growth in the second quarter of 1985 which strengthens speculation of a fundamental trade policy shift. To counter explosive imports, the state is strengthening the role of the banking system and has imposed commodity specific import controls on consumer goods. China has maintained a commitment to preserve currency strength and stability by avoiding currency devaluation, but devaluation is apparently now unavoidable.

Many factors point to a policy linking bilateral exports and imports. The degree of trade linkage varies from country to country. At one extreme, Sino-Soviet trade is pure barter. Under the pact announced in June, the Soviets will supply machinery, transport equipment and chemicals, and invest in building and modernizing 24 industrial plants in return for agricultural and industrial raw materials and consumer goods from China. The United States trade relationship is based much less on such barter agreements. However, when the United States imposed new limits on textile imports, China countered by cutting back on agricultural imports from the United States.

Japan falls somewhere between the United States and the Soviet Union in terms of linkage. Examination of partner trade at the two-digit trade category level in Table 7-11, below, reveals what must be a pure barter agreement between China and Japan. There is a perfect match between Chinese dollar exports of petroleum products and dollar imports of steel for all of 1984. Each is 2.66 billion dollars, which could illustrate the major component of a long-term trade relationship between China and Japan. If they had agreed that dollar value exports of petroleum to Japan would match the dollar cost of steel imports, the sharp recent decline in world oil prices would have required very rapid increases in Chinese crude exports measured in weight, which is what in fact happened in 1984, as crude exports increased roughly 50 percent in volume terms. The value swap of steel for oil first identified for all of 1984 held for the first quarter of 1985 as well, with Japan selling 806 million dollars worth of steel and purchasing 807 million dollars worth of oil.

This oil-steel relationship is a symbol of what may increasingly be becoming a long-run strategy in China's trade policy. Even in a world market context, China will most likely try to tie imports roughly to some level of exports to any given trading partner. Such a bilateral balancing policy, however rough, may be essential for China in a world increasingly given to protectionist sentiments.

Table 7-11
SELECTED 1984 SITC 2-DIGIT EXPORTS AND IMPORTS
(Million Dollars)

SITC Code	Category	Total	Japan	United States	Canada	West Germany	USSR	Singapore	Hong Kong
EXPORTS									
(03)	Fish	292	133	4	1	2	0	2	131
(04)	Cereals	442	61	1	0	0		19	101
(05)	Vegetables & Fruit	794	215	46	24	57	23	36	228
(22)	Oil Seeds	472	184	3	6	5	103	9	38
(26)	Textile Fibers	879	223	14	0	65	31	3	214
(32)	Coal & Coke	306	165	0		1		0	26
(33)	Petroleum	5,450	2,667	682		0		766	267
(65)	Textile Yarns, Fabrics	3,523	400	287	50	82	129	76	1,623
(76)	Telecommunication Equip.	327	8	3	1	0	0	0	289
(79)	Other Transport	444	0	35	1	24		92	55
(84)	Apparel	2,541	299	621	116	141	62	11	808
(89)	Misc. Manufactures	1,184	75	111	12	43	12	23	601
IMPORTS									
(04)	Cereals	1,721	20	741	508	4	0	0	2
(24)	Cork & Wood	714	0	402	91	0	112	1	1
(56)	Chemical Fertilizer	1,616	54	434	93	67	153	1	0
(58)	Plastic Materials, etc.	1,116	261	253	30	121	4	29	23
(65)	Textile Yarns, Fabrics	932	240	56	5	8	0	0	168
(67)	Iron & Steel	4,213	2,666	6	2	328	164	3	30
(68)	Non-Ferrous Metals	1,091	69	67	138	29	83	3	14
(72)	Electrical Machinery	2,062	738	368	5	259	9	13	120
(75)	Office & Data Processing	858	372	332	6	6	0	2	116
(76)	Telecommunication Equip.	1,155	856	40	3	24	0	4	183
(78)	Road Vehicles	1,167	818	14	3	41	83	0	9
(79)	Other Transport	738	242	210	2	35	30	9	6
(89)	Misc. Manufactures	1,184	174	258	12	43	12	23	601

SOURCES: Official Customs Statistics. (J5bx30.D5J)

The trade deficit, and correspondingly, China's trade policy cannot be isolated from other developments in China's domestic economy. The industrial reforms now underway in China encourage enterprises to pursue profit rather than fulfill planned foreign exchange goals. Therefore, enterprises which face better domestic prices for their goods than the world market price are cutting back on exports, while others are taking advantage of the strong demand for consumer durables such as vehicles and televisions by increasing imports. Peking cleared the way for imports of consumer goods to soak up excess currency and avoid inflation in late 1984. However, steps have now been taken to slow the growth of consumer imports that ensued. The flow of imports for lower priority goods will be slowed with the imposition of strict tariffs. Control over decisions to commit foreign exchange were also tightened in response to the rapid drain on funds in the first quarters.

However, recent missions to China by various international agencies have learned that the 1985 drop in reserves is part of a deliberate effort to lower what were considered excessive reserves to a new level adequate to cover three months of imports. Part of the 1984-85 reserve drop unexplained by the current account deficit was due to large purchases of unspecified assets in Germany and Japan. Furthermore, the reserve level appears to have stabilized in the second quarter of 1985. Early reports indicate that foreign exchange reserves fell only half a billion dollars in the second quarter, after falling 3 billion dollars in the first quarter.

The serious introduction of urban reforms, which gives financial independence to individual industrial enterprises, was perhaps the single most significant development in China during the winter of 1984-85. Given the rapid growth of self-financed investment, individual enterprises are apparently deciding to import scarce and badly needed machinery and industrial materials. Banking reforms and relaxed foreign exchange regulations have encouraged this practice.

In March, Peking put a squeeze on foreign exchange because of shrinking reserves. Controls have since been lifted in the four special economic zones and four of the fourteen coastal cities, but not in the other ten. Elsewhere, funds are again being made available for projects to develop energy, transport and nonferrous metal industries or to introduce advanced technology. For example, in Zhanjiang, one of the ten cities to have their development program slowed, of the one hundred projects being planned prior to the cutbacks, sixty have been postponed or frozen, and funds have been raised for the others. Currently, China is concentrating control of access to foreign exchange loan guarantees in a few central financial agencies. This concentration allows China to influence the risk of foreign lenders and, hence, the level of her foreign borrowing. In line with this centralization, the Bank of China will closely monitor the use of foreign exchange to allocate it to the targeted and approved areas. The purchase of consumer goods with hard currency is being restricted via a new regulatory tax as of July on motor vehicles, computers, video-cassette recorders and other consumer products.

In addition to direct regulation of foreign exchange, China has been reforming the exchange rate policy. On January 1, 1985, China abolished the internal settlement rate of 2.8 yuan to the dollar, which had been used for virtually all foreign exchange transactions (with the exception of tourist exchanges and overseas remittances). Coincidentally, the so-called official exchange rate was devalued until it reached roughly 2.8 yuan/dollar. The official exchange rate took over the role of the internal settlement rate to become China's effective exchange rate. In September, China continued the reform process by embarking on a course of gradual currency devaluation. By the end of October, there had been a 10 percent devaluation.

PROBLEMS

In the remainder of 1985, exports are likely to weaken because China is carrying out ambitious reforms in domestic pricing, foreign exchange regulations, and export reimbursement. These reforms and problems are having some negative influences on exports. The gradual devaluation of the yuan could temporalily contribute to China's growing commodity trade deficit. At the same time, the still low official exchange rate has also created a black market with a much higher exchange rate. In addition to domestic problems, China's exports are hindered by rising global protectionist tendencies.

Export problems emerge because China's domestic prices are so out-of-line with international prices that domestic firms, which keep their books in yuan, find it more profitable to sell manufactures domestically than abroad at the current exchange rate of 2.8-3.1 yuan/dollar. Before the reforms, the foreign trade corporations, FTCs, motivated to earn foreign exchange, had been willing to take domestic yuan losses on some products to earn dollars. They made up the losses on exports of other products as well as imports of goods which brought significant yuan profits. The post-reform decentralized system, however, gives no such compensation, and so exports of many light manufacturing goods have faltered seriously. In the meantime, individual firms have been encouraged to export directly, and the role of the traditionally powerful FTCs has been significantly weakened.

Recently publicized black market operations have been run at rates as high as 5.0 and 5.4 yuan/dollar. The solution to China's currency valuation problem requires adjustment of the over-inflated domestic retail prices for those manufactures on the one hand, and a further devaluation of the exchange rate on the other. However, a policy of more mini-devaluations, because of the expectations for further devaluations it creates, could exacerbate the short-term trade deficit, under-representing China's long run trade strengths. If continued gradual devaluation seemed likely, importers would step up their orders in an attempt to get delivery and payment settlements as quickly as possible. Conversely, exporters would delay accepting orders and payments if they thought they could soon get better terms with a continually weakening yuan.

Regardless of the exchange rate, China's exports face growing protectionism in a slowly growing world economy. In contrast, the rapidly growing world economy of the late 1960s supported the export-led growth in South Korea, Taiwan and Japan's "miracle growth."

PROSPECTS

Remembering back to the late 1970s and early 1980s, when "readjustment" and "foreign investment absorbtive capacity" were phrases often heard in explanations of China's sudden contraction in investment imports, it is tempting to conclude that the period of readjustment is almost over, and that with both urban and rural reforms well under way, and the party "rectification" all but completed, China's leadership has decided that it is now time to pick up where China left off when the "mini-Great Leap" was aborted.

The growth in net imports of producer goods in the first half of 1985 supports this theory. It is remarkable especially because it follows the already rapid build-up of such imports in the latter half of 1984. First-half data strengthen suspicions that China's trade strategy is shifting away from the very careful grip held on imports in the early 1980s. Only data for the second half of 1985 will tell if the new level of imports is a major shift or a temporary loss of control. But, either way, the long term outlook is for trade to regain near balance and for moderate growth in borrowing to continue the import of foreign technology and investment goods.

The continued growth in imports of steel and vehicles is particularly impressive. The recently publicized corruption scandals involving vehicle imports might reverse this trend, but the general import growth in producer goods of all kinds suggests that vehicle import growth will continue. This pattern makes sense in light of China's transport bottleneck, which is being eased significantly only by growth of highway transport. The volume of goods shipped by cooperative and privately operated vehicles is growing especially rapidly.

The reform of the foreign exchange system is likely to continue. In response to the greatly increased need for foreign exchange in the market-oriented economy, systemic changes would deal with retention of foreign exchange by export businesses, the level of State foreign exchange reserves and the exchange rate. Eventually the yuan may be devalued to 3.5 or 4.0 yuan/dollar or lower, depending on domestic inflation. In any event, a devaluation of the yuan, however gradual, would also be important to the urban reforms, as the central government relies more and more on prices and other indirect controls to replace direct administrative manipulations.

Official plans for the the next five years focus on increasing exports with about 7 percent annual growth necessary to achieve the 1990 target. The plan also calls for exports to be given priority over domestic consumption whenever possible and imports to be concentrated in the areas that support export growth, such as advanced technologies, computer software and key equipment. Importing large amounts of raw materials to support too-high construction levels is to be stopped as are high levels of consumer goods imports.

CHAPTER EIGHT: Agriculture

EXECUTIVE SUMMARY

TRENDS

- China's 12 percent agricultural growth in 1984, following 8 percent in 1983 and 11 percent in 1982, is a remarkable record of sustained rural development.
- Even more significant than total growth is the diversification of agriculture away from staples and toward vegetables, industrial crops, animal husbandry, and forestry.

POLICY

- The shift this year to a system of contractual output sales rather than quantity requisitions signals a major new stage in the commercialization of the rural economy.
- Official policy is encouraging the consolidation of lands under leasing or other arrangements to form "specialized households" with more professionally competent management.
- Agricultural taxes are to be shifted from an in-kind payment to financial obligations payable in cash.

PROBLEMS

- The major problem in 1985 is weather, with typhoon floods in the Northeast grain belt cutting output by 30 percent, and drought virtually throughout the country reducing yields.
- Output for numerous crops and products will show instabilities while prices and commercial relations are in flux.
- China has a critical shortage of good quality fodder for its rapidly growing animal husbandry industry.

PROSPECTS

- Because of the poor weather, 1985's crop output will barely grow 1 percent, while overall growth will fall to 6 percent.
- China's intermediate- and long-run agricultural prospects seem excellent, with growth in the 6-9 percent range and a rapidly maturing output mix and technology.
- Rapid commercialization of China's rural economy will continue, as more output is sold for processing and less is self-consumed.
- Land sown to grains will continue to decline while demand increases, eventually leading to higher prices or imports.

TRENDS

The dynamism of China's agriculture since 1978 has intensified in 1984 and 1985, with total agricultural output, excluding rural industry, growing 11.7 percent in 1984. Crop output growth, traditionally the slowest of all agricultural sectors, was greater than 8 percent in 1984 for the third consecutive year. Except for 1980 which was a year of severe droughts and floods, crop output growth has not fallen below 6 percent annually in any year since 1977. This high sustained growth record is just one indication of the sweeping changes in China'a agriculture, changes which continue to unfold in 1985.

The two major components of these changes are the privatization of all agricultural sectors and the rapid commercialization of agriculture, as farm households increasingly specialize, increasingly use markets, and increasingly introduce better methods, whether technical, such as vinyl greenhousing, or managerial, as reflected by shifts in cropping and output patterns.

It cannot be overemphasized, however, how fundamental the rural land tenure reforms have been. Farmers in private conversation no longer call the program the "individual responsibility system," as it is officially known, but rather the "individual ownership system." China's agriculture is now a private owner-tiller agriculture, and what is more, an owner-tiller agriculture with, by poor-country standards, a remarkably egalitarian distribution of land, herds, and other assets. Such a relatively egalitarian distribution of productive assets implies relatively equal incomes, with profound implications for the nature of China's economic growth and related social development. China's rural economy has, to a degree, become a self-propelled economic entity, with its own light manufacturing sector, village industry, enjoying the highest sustained growth of any sector in the economy.

Rural output as discussed above does not include village industry (sometimes called brigade industry). However, as traditionally measured by China, the overall high growth in agricultural value reflects not only strong growth in traditional sectors, but also the growing significance of village industry, which has had an average growth rate of 22.2 percent over the past 13 years. This sector now contributes more to the gross value of agriculture than animal husbandry, making it the second largest component in agricultural output value. But precisely because of the rapidly growing output value of village industry, Chinese statisticians have begun to classify it as part of industrial output rather than agricultural output. This practice more accurately reflects the nature of village industry whose rapid growth is an indication of the rapid diversification of the rural population.

Table 8-1
GROSS AGRICULTURAL GROWTH AND OUTPUT VALUE, 1976-84

YEAR	Crops	Forestry	Husbandry	Fishery	Village Industry	Other Sideline	Gross Value	without Village
Growth (Percent)								
1976	-2.0	15.6	2.2	1.0	44.8	12.5	2.2	.0
1977	-1.0	-1.9	.3	5.2	23.2	7.2	1.3	-.4
1978	9.4	5.5	4.9	.0	15.4	2.2	8.5	7.9
1979	7.2	1.4	14.6	-3.4	16.4	-3.5	8.1	7.3
1980	-.5	12.2	7.0	7.6	21.3	6.1	3.5	1.7
1981	5.9	4.1	5.9	4.4	12.2	8.5	6.6	5.9
1982	10.3	8.5	13.2	12.3	9.7	21.9	11.1	11.3
1983	8.3	10.2	3.9	8.6	22.3	11.6	9.6	7.8
1984	9.7	16.7	13.9	16.6	52.4	26.6	17.1	11.7
Output Value (bil. 1980 Yuan)								
1984	196.25	13.73	48.02	5.76	57.65	16.29	337.70	280.05

SOURCES: China State Statistical Bureau. (J5BD14.R5D)

Table 8-1, above, shows the sustained growth in virtually every agricultural sector. The pace of output since 1980 has been particularly impressive. At the same time, the very rapid growth in village industry is shown to have had a major influence on agricultural growth rates as traditionally measured, with the exception of 1982, when light industrial growth nationwide was slowed by official restrictions. The difference in output with and without village industry can be seen in the two right-hand columns of Table 8-1.

Table 8-1 also shows the particularly impressive record for 1984. The sustained crop output growth is as much the result of shifts in output to higher value-yielding crops as it is the result of increases in yields of individual crops themselves. The renewed or continued growth in all other rural sectors reflects the diversification of agriculture as the labor force shifts out of traditional crop production.

In addition to crop diversification, animal husbandry plays a central role and, except for village industry, is by far the largest non-crop subsector of agriculture. Growing 11.7 percent in 1984 (the same as for all agriculture), animal husbandry recovered from its slow growth in 1983, due largely to low pork prices and the shift of farm resources, especially in the easternmost provinces, into other activities. Table 8-2, below, shows that the growth in animal husbandry output has continued and even accelerated into 1985. In the first six months of 1985, output growth of all meats was nearly 16 percent over the same period in 1984. Output growth rates for eggs and milk in the same period were more than twice that for meats.

Table 8-2
OUTPUT OF ANIMAL HUSBANDRY PRODUCTS, 1980-85
(Percent Growth)

Year	Pork	Beef	Mutton	Pork, Beef, Mutton	Eggs	Milk
1980	13.2	17.4	17.1	13.5	--	6.6
1981	4.8	-8.0	7.0	4.6	--	13.1
1982	7.0	6.9	10.1	7.1	--	25.4
1983	3.5	18.6	4.0	3.8	18.3	14.0
1984	9.8	21.2	5.3	9.9	32.4	19.8
1985*	14.7	-- 42.3 --		15.6	43.4	33.3
1984 Output:						
thousand tons	14,451	382	573	15,406	4,400	2,210
kg per capita	14.0	.37	.55	14.9	4.3	2.1

* NOTE: The growth rate for beef and mutton is combined for 1985. 1985 data are for the first six months of 1985 only.

SOURCES: Chinese Agricultural Yearbooks, SSB Communique, and 1985 Statistical Abstract. Output of eggs and individual meats are RCR estimates based on USDA methodology. (J5CH01t.R5H)

In animal husbandry, the pattern of output and investment has shifted away from the pastoral regions of China to suburban farms and enterprises. This is particularly true of the dairy industry and the production of whole milk, of which there is a chronic shortage in all urban areas. Urban milk output has grown faster than output in other parts of China (for 1983, 19.5 percent as opposed to 12.2 percent). At the same time, meat demand has come to emphasize higher quality cuts of meat and lean meat. Fatty pork is reportedly very difficult to sell. Both of these trends, urban-based dairy and high-quality feed-lot meat production, represent a major shift in animal husbandry technology with important implications not only for consumption patterns, but also for feed grain demand.

For the time being, however, much of animal husbandry output, which for China is overwhelmingly pork production, is small-scale peasant-based production. As such, it has been heavily influenced by the shift to private management. Fattening periods are shorter and dressed weights (pork per hog) have increased from 53 kilograms in 1979 to over 60 kilograms in 1984. The fattening periods are still long by international standards (18 months as opposed to 12 in the U.S.), indicating that potential for sustained growth in output exists.

China's meat production is placed in international comparison in Table 8-3, below. China's meat output matches that of the Soviet Union and is only somewhat below output in the United States. On a per capita basis, of course, China's output is extremely low by world standards, roughly half the level for Brazil.

Table 8-3
OUTPUT OF PORK, BEEF, AND MUTTON BY MAJOR WORLD PRODUCERS, 1982-3

	1982 (Percent Growth)	1983 (Percent Growth)	1983 Output (mil. tons)	1983 Output (kilo/ person)
CHINA	7.1	3.8	14.0	13.8
Argentina	-10.8	-11.7	2.6	88.9
Australia	1.8	-.9	2.3	149.4
Brazil	4.3	2.9	3.5	27.1
W. Germany	-4.7	14.3	4.6	75.6
Japan	2.0	1.0	1.9	16.3
United States	-3.9	5.1	17.7	75.5
U.S.S.R.	-2.9	7.7	13.4	49.2
Other Producers	.9	3.0	53.8	19.6
WORLD TOTAL	-.03	3.8	114.0	24.6

SOURCES: SSB Statistical Yearbooks and FAO production yearbook. (J5CH25BT.R5H)

The new agricultural production contracts signed under the contract procurement system are shifting land out of grains and cotton to uses with higher value yields, which could maintain the high growth in overall output, in spite of land constraints and slower growth in yields for individual crops. A further reduction in the area planted in rice in Guangdong is planned to allow the province to take advantage of its subtropical climate to produce higher yielding industrial crops. In 1985, bumper harvests of sugarcane, fruit, jute, tobacco, and other local special products were reaped. The rice that is being grown now is finer, higher quality rice that consumers demand.

The area planted in cotton will be reduced because supply greatly exceeds demand. Despite damage to the cotton crop due to poor weather in 1985, there was a bumper crop. Therefore, the state will purchase more of this year's crop at the lower fixed price and less of the crop at the above-quota higher price. The amount of cotton to be purchased by the state in 1986 is to be equal to the amount purchased this year.

As an additional indicator of agriculture's commercialization, farmers are increasingly selling their output for further processing rather than consuming it themselves or selling it in its unprocessed form for direct consumption. Furthermore, the growth in the food processing industry (9 percent in 1984) accelerates rural specialization, so that there is more commercial exchange in the rural areas themselves. Previously, commercialization in the rural areas consisted mainly of sales of rural agricultural products to urban areas. As an example of foods used for manufacturing inputs, in 1984 twice as much grain was used in the food processing and brewery industries than in 1978.

To summarize, the trends in China's agriculture, allowing for variations in weather, are ones of rapid growth and diversification, with animal husbandry playing a leading role in the process. These trends reflect, in turn, the policy objectives of the central government.

POLICY

Major official policy initiatives in rural China continue to emphasize the individual and private nature of the new agricultural system, both by extending the ownership system and reforming prices. By far the most significant move of 1985 was the introduction of the contract purchasing system, through which farmers have a degree of choice over what they produce. At the same time, the new land ownership (or "responsibility") program has been extended to the nation's vast rangelands, promising eventual solution to widespread problems of overgrazing, soil erosion, and desertification. A twist in the land ownership system overall has come from official encouragement to farmers to pool their lands and herds for more efficient operation, often under the leadership of so-called "specialized households."

The "Contract Purchasing System" inaugurated at the beginning of 1985 is intended to speed up the process of shifting the bulk of China's rural labor force out of crop farming and into other economic activities, many of them in the increasing new urban areas. The first phase of the rural reforms, the household responsibility system, is over 5 years old and has essentially transformed rural China's production from a collective system to one based on private ownership. With this base, the second-phase reforms promise far-reaching changes in the rural economy and continued growth in productivity and incomes. Such sustained high agricultural growth is a major stimulus to the continuing success of the industrial and urban reforms.

Under China's traditional agricultural system, each commune, brigade, team, and more recently, each household was assigned an output quota for delivery to the State at the quota price. Sales to the State over the quota were sold at various higher prices. Individual farmers had little if any control over what they grew.

Under the new contract procurement system, announced in "Document 1" of 1985, mandatory deliveries of output to the State are replaced by output deliveries specified in annual contracts to which the farmer and the State mutually agree. This new arrangement further dismantles China's centrally-planned economic control mechanisms and further converts rural China to a commercialized, market-oriented economy.

The major impact of such a reform is the sudden increase in the sensitivity of the rural economy to prices. The irrationalities in relative rural prices are increasingly apparent, with vegetable output declining in some areas because of low prices. Just as shifting to profit incentives and enterprise independence in industry will speed its price reform, the increased independence of rural management is forcing rural prices to move towards supply equilibrium.

Official policy is aware of this difficulty and has moved to meet it for some rural products. In particular, the spring and summer of 1985 saw major price adjustments in foods for urban areas. The largest price increases were for meat and fish products. According to scattered reports, some beef prices increased 120 percent, while the most important price, for pork, increased 36 percent. A more nationwide price increase measure, from urban household survey data, shows that in the second quarter of 1985 pork prices increased 25 percent, beef prices 9 percent, chicken 19 percent and fish 41 percent (see Table 9-4 in Chapter 9, on Commerce and Prices). These prices are reported to have had a major influence on urban consumption patterns during the summer of 1985. To lessen the impact of price rises on urban standards of living, income supplements were given to households, supplements said to match the average increase in spending needed.

The important point to stress about these official price changes is that they are apparently part of a program of relative price adjustments nationwide, price adjustments designed to make the private-based rural economy function in the new decentralized private-ownership environment.

1985 policies have extended the framework for private control to China's grasslands, vast extenses of semi-arid range suitable only for grazing livestock. Traditionally, and even under the commune system, these rangelands were a commons, grazed by all. As a result, with the settlement of herdsmen and with the very rapid population growth since 1949, the rangeland has become seriously overgrazed, with badly deteriorated ground cover, wind and water erosion, and desertification, with moving sand dunes threatening the more valuable lands.

After a pilot law passed in Inner Mongolia in 1983, the central government passed a National Grassland Law in June, 1985, which delegates control of specific tracts of range to individual herdsman households. Encouraged to combine their range tracts, herdsmen now have incentives to control the use of their grazing land, the first essential step in improving their animal husbandry practices. Such a move to privatize the grazing range is extremely rare in poor countries, where semi-arid regions world-wide are in serious decline. Although implementation will require some period of time, for rural China, the grasslands law represents the latest and most extreme step being taken by China to tap the potential of private incentives by transferring control of productive assets to individuals.

The official encouragement of combining lands is also increasingly widespread in the more agricultural areas of rural China. Specialized households, with more experienced farmers in leading management positions, are being allowed to receive land on leasehold or through some other sharing arrangement (but not "sale," it is emphasized). Not only does this trend provide a better environment for technology tranfser through the newer extension methods, but it also frees other members of the rural labor force to enter other pursuits, in particular sideline occupations, often with some manufacturing component. At the same time, these more mobile members of the labor force keep their ownership stake in, and income stream from, their original land distributed under the reforms of the early 1980's.

PROBLEMS

In addition to the potentially serious weather problems in 1985, China's agriculture, and rural economy in general, face a host of problems related to output adjustments under the new price system, losses of skilled labor and land to industry, illegal over-taxation from local officials, and problems of inefficient transfers of technical information to the farmers who need it.

It is difficult to talk about weather in a country as vast as China, where severe droughts and floods can and do occur simultaneously over areas populated by hundreds of millions of people. 1985 is one of those years. After severe drought in parts of the Northeast through early and mid-summer, sudden successive typhoons hit the same region and flooded much of the grain crop. As a result, grain output in one of China's major breadbasket regions is reported down as much as 33 percent in some provinces. Given the reduction of planted area to grains in most other parts of China, grain production is likely to be significantly reduced from 1984's record production.

At the same time, drought conditions have continued in most other major agriculture regions, from Guangdong in the south to Hebei in the north, and even Hunan along the Yangtze River. It is still too early to know just how bad the 1985 harvest will be, but a sharp reduction in rural incomes and economic activity which could result would represent a serious problem, although possibly only a temporary one, for all of rural China.

A different problem, related to the price changes and rapidly growing commercialization of agriculture, is the instability of output as farm prices find their proper relative levels. This problem has already been very apparent for vegetables. In Jiangsu, for example, arguably China's richest farm province, peasants have taken land and other resources out of vegetables because prices from the state contracts were still too low to be attractive, given other opportunities. The May 1985 vegetable crisis in Peking is another well-known example of peasants voting with their hoes and refusing to plant crops which are poorly paid. On the other hand, there are some reports that urban pork consumption has dropped after the strong price rises in the first half of 1985, because the quality of the meat did not warrant the price, when consumers considered alternative sources of protein, especially eggs.

There have been continual official complaints and other accounts in the Chinese press of the loss of land and labor to more idustrial sideline activities. There is reportedly a shortage of well-educated and experienced workers in agriculture, as a result of the lure of [illegible] jobs and of towns. The quality of labor, for tillage, care, and weeding, has reportedly declined. The problem has spread to rural party cadres, who are focusing attention more on town industry than maintaining balanced crop output of good quality. Without more quantitative measures, it is difficult to evaluate these many reports, but they are bound to appear in some degree, and yield and output results for 1985 and 1986 will eventually provide relevant information.

It is also important to mention the problem of feed quality and availability for animal husbandry. Traditionally, China's animals have been foragers, eating what they could find. In the grasslands, the nutrient value of the grass and hay has deterioriated, and other forms of fodder are poorly developed. For a modern animal husbandry industry, quality nutrition is essential, not only from grains and other specialized fodder crops, but also from feed additives, which China now imports in considerable quantity. China is only just beginning to address this problem, which could prove to be a major restriction on the growth of quality meat and dairy product output.

A final fundamental problem is one of technology. With private tiller-owner agriculture now the rule in China, technology transfer to rural areas has become a more traditional job of extension work and education. These channels are poorly developed in China, although a network of agricultural colleges exists and forms the foundation of the emerging extension program. It is clear that the early easy gains in farm productivity from the new ownership system cannot continue for long. The critical question is whether the needed technology transfer can occur to maintain the growth in productivity so apparent in the early 1980s.

PROSPECTS

In general, the intermediate- and long-term prospects for China's agriculture are excellent, because the owner-tiller environment will continue to generate adjustments to weather and technical conditions, and at the same time inspire efforts to make the land more productive, either by different choices for cropping patterns, or because of attention paid to other products, in particular animal husbandry.

For 1985, however, crop output will barely grow at one percent and agricultural output growth overall will fall to 6 percent, which is still very high by poor country standards. Emboldened by the success of the past few years, China's agricultural officials in 1985 began speaking of quadrupling agricultural output by the year 2000, relative to 1980, which is a much higher target than that announced in 1980, when all of industry and agriculture together were to quadruple in the same period. Quadrupling agriculture is not likely, but growth will be such that tripling is possible and even probable.

One major mechanism for this increase is the shift of planted land and rural labor out of traditional staple crops, such as coarse grains, and into other crops with higher value yields and into animal husbandry and sidelines which bring an even greater return to labor, the relatively plentiful resource.

The shift in cropping patterns is extremely important for maintaining China's rapid growth in agricultural value output. Some crops, such as fruits, vegetables, and certain industrial crops, have a much higher "value yield," gross revenue per hectare, than staples and other traditional crops. Even if yields in staples grow slowly, and even if farm land is increasingly taken over for industry and housing, shifting the remaining land from lower to higher value-yielding crops will increase the average value yield for all planted land. Hence, in spite of the land constraints and contemporary limits on yields for individual crops, total crop output in China, barring major weather disasters, can continue to sustain its remarkable growth rate of the past few years.

In mentioning weather again, it is important to remember that many of the worst weather disasters in any economy are often the results of man-made problems as well as natural ones. If there is an administrative and incentive framework sufficient to bring a concerted response to some natural condition, its impact is often greatly blunted. Conversely, if there is a breakdown of government and private effectiveness, natural downturns, even mild ones, can have a disastrous effect. China is in a position to give maximum response to the natural difficulties represented by 1985's difficult weather pattern. Weather has not been this poor since 1980, when it was much worse. In 1980, the whole rural land tenure reform was not yet in place, and yet output still rose 1 percent, with crop output remaining unchanged from 1979. In other words, the weather in 1985 may be poor, but the system has not been tested to learn its response to such difficulties, and all indications are that the response will be very good.

CHAPTER NINE - Commerce and Prices

EXECUTIVE SUMMARY

TRENDS	* A commercial renaissance is spreading over China in the wake of rural and urban reforms and the speed of urbanization. * Retail sales and rural procurements are rapidly shifting away from state enterprises and list price transactions. * As a result, in 1985 inflation is high by Chinese standards, although incomplete data make analysis difficult.
POLICY	* Official policy has strongly encouraged both the expanding commercialism and price adjustments leading to inflation. * Collective and decentralized ownership shifts have accompanied official urban price increases, part of the first phase of a 5-year price reform program. * Administrative discipline of price rises is still crucial.
PROBLEMS	* Finding the right pace for commercialization and price adjustment is the critical problem. * Commercialization without a corrected price system is leading to output irrationalities, shortages and gluts.
PROSPECTS	* Commercialization of the economy will continue and even accelerate, due to fundamental underlying factors. * Inflation will be high by Chinese standards in 1985, but will moderate in 1986, as price discipline measures see-saw.

TRENDS

The many hawkers and produce stalls increasingly seen in China's cities and towns represent a much more fundamental and widespread commercial renaissance. A central theme in China's economic development since 1978 is the rapid commercialization of economic life, as reforms and their repercussions move China further and further away from the physical allocations, command production, and semi-self-sufficiency of the Maoist period. The rapid increase in exchange transactions, whether retail sales or farm wholesale sales, and in particular sales by collectives and individuals, is perhaps the clearest indication of this commercial explosion. At the same time, the freer pattern of transactions is resulting in rapid price changes, especially in 1985, which appears to be a year of major inflation. Both these important trends, commercial decentralization and price inflation, may be at their maximum this year.

The extraordinary explosion in commercial activity is best seen in Table 9-1, below, which shows not only the double-digit growth of retail sales overall, but also how growth of sales by collectives and individuals have far outstripped sales by state-owned units. Acceleration of the sales in 1984-85 makes the process even more remarkable. Retail sales overall grew 25 percent in the first half of 1985, and sales by individuals, which have virtually doubled every year since 1980, have continued to grow at a 95 percent pace in 1985. In short, China in 1984-85 is experiencing a period of protracted commercialization and monetarization of its economy, which must be, and in fact is, having a profound effect on every aspect of China's economic life.

Table 9-1
RETAIL SALES

Year	Total Retail Sales	State Owned	Collectively Owned	Jointly Owned Ventures	Individual	Peasants to Non-peasants
	(Growth Rate)					
1980	18.9	13.1	61.8	N/A	248.8	45.3
1981	9.8	4.6	32.5	175.0	149.3	29.6
1982	9.4	4.7	21.3	45.5	99.5	23.9
1983	10.9	4.4	14.4	125.0	147.3	20.0
1984 *	18.5	14.9	12.4	111.1	75.4	27.8
1985 **	24.5	13.9	18.0	66.7	95.2	N/A
	(Billion Yuan)					
1984	320.6	153.8	133.7	.76	32.4	17.0

* NOTE: The definition of State and Collective Enterprises changed in 1984. The growth rates are calculated based on consistent definitions.
** NOTE: 1985 for first half only. Total Retail Sales is exclusive of Peasant sales to Non-peasants.
SOURCES: Official Chinese publications and RCR calculations. (J5CBC01.D5J)

Commercialization of the rural economy presents another picture of the changes in the economic life in China. Through the late 1970s the rural economy was bound by a system of required output deliveries to the state at fixed list prices and attempted commune self-sufficiency. With the abolition of communes in the early 1980's, with the distribution of land and other productive assets to individual farmers and herdsmen, and with the shift to mutually agreeable contracts as the basis for sales to the state, rural economic life in 1985 would be unrecognizable to a farmer of ten years ago.

This rural commercialization is presented clearly in Table 9-2, below, which shows how sales at the traditional list price have plummeted from 85 percent of the total in 1978 to 34 percent at the end of 1984. At the same time, the share sold at above-quota prices has quadrupled while sales at other "free market" prices have tripled in volume.

It should be mentioned at this point that "free" markets are not entirely free, because all prices are monitored by state agents and significant deviations from acceptable norms are rather strongly discouraged.

It is probably not an exaggeration to say that there is a commercial "fever" in rural China, and 1985's rural contract reforms are an important part of this fever. Presented in what is know as "Document One" for 1985, the contract reforms end the more than 25-year old Maoist policies of required crop sales to the state. In their place, individual contracts for delivery of output at agreed-upon levels and price have been substituted. For a more thorough discussion of agricultural reforms in general, see Chapter 8.

This commercial fervor in rural China in 1985 still coexists with many regulations in food distribution remaining from the earlier collective period. Competition between individually and peasant-run operations on the one hand and state-owned commercial enterprises on the other hand is forcing rapid changes in the state stores. In general, the state stores are being forced to provide fresher produce and better quality products in reasonable quantities. In many cases, the state stores cannot compete with private traders for higher quality meats, fish and vegetables, because of the private willingness to pay premium wholesale prices.

Table 9-2
VOLUME OF FARM AND SIDELINE SALES BY PURCHASING PRICE 1978-84

	Total Value	List Price	Above-Quota Price	Nego-tiated Price	"Free" Market Price
(Billion Current Yuan)					
1978	55.79	47.24	4.42	1.02	3.11
1979	71.36	51.17	11.94	3.50	4.75
1980	84.22	54.22	15.10	8.00	6.90
1981	95.50	55.56	20.00	11.00	8.94
1982	108.30	62.22	22.50	12.50	11.08
1983	126.50	60.70	35.50	17.00	13.30
1984	144.00	48.78	48.39	20.70	26.13
(Percent of Total)					
1978	100.0	84.7	7.9	1.8	5.6
1979	100.0	71.7	16.7	4.9	6.7
1980	100.0	64.4	17.9	9.5	8.2
1981	100.0	58.2	20.9	11.5	9.4
1982	100.0	57.5	20.8	11.5	10.2
1983	100.0	48.0	28.1	13.4	10.5
1984	100.0	33.9	33.6	14.4	18.1

SOURCES: State Statistical Bureau official data.

Finally, one area for which there is little official statistical data is the commercial relations between enterprises. Yet, what information there is, describes a rapidly increasing role of horizontal transactions between enterprises for scarce materials. For many materials, in particular energy and metals, there is heated competition for deliveries, and increasingly the state enterprises, which traditionally received priority in supplies, are missing deliveries and complaining about non-fulfillment of traditional contracts. Again, the main issue is price. Other purchasers are offering premium prices, and sellers are finding ways to accomodate their needs before those of state enterprises.

As much of the discussion above indicates, the commercialization of China's economy is closely linked to prices and price changes. 1985 has been targeted by officials as a major year for adjustments in what is universally regarded as an irrational price system and not representative of relative scarcities. Many staples and basic materials, such as energy, are low-priced and rationed or in short supply. Others, in particular manufactures considered to be luxuries, are sold at very high prices and have voluminous unsold inventories. In addition, there is little, if any, price differentiation for quality differences.

Under the pressure of commercial transactions, these prices have begun to accelerate adjustments already begun before 1985. Because prices in general rise more easily than they fall, the result has been significant inflation in

1985. At the same time, official price changes, especially in foodstuffs sold to urban populations, have added to the inflationary trends reported nationwide. Tables 9-3 and 9-4, below, give what limited information there is on 1985 price changes.

Table 9-3
PRICE INDICES
(Percent Growth)

Year	Retail Price Index	Cost of Living Index
1970	-.2	.0
1971	-.8	-.1
1972	-.2	.1
1973	.6	.1
1974	.5	.7
1975	.2	.4
1976	.3	.3
1977	2.0	2.7
1978	.7	.7
1979	2.0	1.9
1980	6.0	7.5
1981	2.4	2.5
1982	1.9	2.0
1983	1.5	2.0
1984	2.8	2.7
1985*	5.6	6.3

SOURCES: State Statistical Bureau official data. (J5CBC02S.T5J)
* NOTE: 1985 indices are estimated from data for the first 3 months of 1985.

It is important to note that Chinese data on prices, especially prices in rural markets and fairs, are probably of poor quality, because of the lack of Chinese familiarity with random sampling techniques. Additionally, many of the most significant price increases have occurred in unofficial transactions and hence are under-reported in the overall average price indexes. It is not clear, therefore, how much the various published price data deviate from what random sampling would show. Given the widespread reports of black market activities, it is very likely that price increases in 1985 are considerably higher than those reported in official statistics.

Nevertheless, data in Tables 9-3 and 9-4 show that 1985 is a year of relatively rapid price increases, and since much of the price rises have been reported in the second and third quarters, subsequent data are certainly to show a more exaggerated trend. The data in Table 9-3, above, indicate just how low official inflation has been in China. The one recent exception was in 1979-80, at the time of major rural price reforms associated with rural land reform begun at that time. 1985 appears to be a second period of price inflation, but this time in industrial goods as well as rural goods, again coinciding with major reforms, this time in industry and the urban economy.

Urban household survey data in Table 9-4, below, show the relatively rapid rises in average prices for major non-staple foods purchased in 1984 and 1985.

The growth rates are calculated relative to the same quarter in the previous year. Meats and marine products (fish and shrimp) have shown a strong general increase in prices, especially in the first half of 1985. At the same time, eggs and milk appear not to be affected by the reforms so far. While small-scale production of eggs by individual farmers has reportedly kept supplies up in urban areas, fresh milk is in critically short supply and some scattered price rises in several cities have begun to occur.

Table 9-4
GROWTH IN PRICE (UNIT VALUE) OF MISCELLANEOUS FOODS
(Percent)

Time Period		Pork	Beef & Mutton	Chicken	Fresh Eggs	Marine Foods	Fresh Milk
1984	I	4.13	11.03	3.67	.06	10.37	.16
	II	5.11	19.38	5.33	-.85	8.84	.94
	III	-.84	5.59	5.87	-1.92	12.95	9.92
	IV	5.85	9.75	7.50	1.20	13.87	-3.00
1985	I	11.38	19.86	21.60	2.67	36.99	-10.24
	II	25.28	9.11	19.23	1.47	41.47	3.43

SOURCES: SSB, Monthly Bulletin of Statistics, July-August, 1985, pp.79-82 (J5CBC01T.B5J)

Overall, then, commercial activity in China is growing very rapidly and emphasizing non-state insitutions, with the most rapid growth in retail sales coming from individuals. An important part of this commercial explosion is the widespread program of price adjustments underway in retail, rural, and industrial materials markets. Better data are needed for a more complete understanding, but what information there is indicates that China is at least beginning the difficult yet important task of industrial price reform.

POLICY

China's clear policy is to encourage commercialization and price adjustments. The encouragement has taken many forms, including promotion of ownership shifts from state to cooperative and even individual control, and increasingly easy permission for opening private shops. In terms of pricing the policy includes adjustment of state prices as part of a five-year program, upward adjustments of major urban foods, with income subsidy compensations, and increases in industrial material prices for new customers and new contracts as a way of gradually adjusting at the margin. At the same time, official policy is acutely worried about inflation, and numerous administrative steps seek to maintain control, including a distinction being made between "good" and "bad" inflation.

The clearest and most fundamental element in the official policy is the program of rural and urban reforms, which by May, 1985 had transferred control of more than 10,000 industrial enterprises to on-site managers. For more information on these reforms, see Chapter 3, on Industry. The rural transfer of ownership has been essentially completed for several years, although the National Grasslands Law of June, 1985 basically transfers ownership rights to herdsman for China's vast semi-arid rangeland. The importance of these ownership and control tranfers is the powerful incentives they introduce to buy and sell commercially rather than trusting the cumbersome and undependable plan allocation process. These shifts are the driving force behind much of China's commercial expansion.

Both central and local government policies are continuing to encourage private shops in cities and towns, largely to absorb the marginally employed. At the same time, outlying peasants are increasingly being given permission to come into urban areas to sell their produce and other goods. Additionally, the very rapid urbanization underway in China is bringing rural populations into urban areas permanently, where their lives become much more closely related with the nation's money economy. All of these steps are supporting the use of money and markets, in both urban and rural settings.

Price reforms in China, on the other hand, are a much more difficult set of policies to carry out, because of the impact rapid inflation might have on urban political stability, in particular. In fact, the commercialization reforms are themselves the most basic part of price reforms, because with individual and profit incentives introduced, the natural power of exchange relationships to raise prices of scarce goods and services is almost irresistable. This is what the Chinese are discovering. Therefore, together with their programs to introduce price shifts, official policy is also making considerable efforts to police and discipline price rises considered to be excessive or poorly timed. The combination of these two forces, relaxation and discipline, governs the progress of price reforms in 1985.

1985's portion of the announced five-year price reform program has these basic parts: (1) increases in meat prices, (2) transport fare increases for short hauls, both passenger and freight, (3) the shift to contracts rather than procurements for grain, at higher average prices, and (4) the introduction of price differentials for product quality differences. The spring increase in urban meat and other food prices received the greatest attention, as urban populations were also given income supplements to compensate for the effective income loss due to price rises. By all accounts the adjustment was a success. This whole program, however, is most important for showing the seriousness with which official policy is addressing the need for relative price adjustments.

The only information on price adjustments for industrial materials comes in spotty reports about very rapid price increases for metals, especially steel and aluminum. Only early in the fourth quarter of 1985 have there been reports of price softening, apparently in response to successful government efforts to reduce investment. The reported 30-50 percent spring and summer increases in metal prices, followed by a ten percent or so correction in October, parallels the pattern in industrial output growth, which was up 23 percent for the first half of the year, but which had fallen to 14 percent by September, on a monthly basis over September, 1984. The overall effect, however, will have been a very rapid 1985 rise in metal prices.

For energy and some other basic materials, one strategy has been to keep old prices for traditional deliveries to traditional customers, but to charge higher prices to new customers and for increases in the traditional deliveries. This has the advantage of requiring decisions about new uses to consider the higher scarcity value of the materials, while at the same time leaving the precarious financial condition of other traditional customers undisturbed.

The concern about overly rapid price rises reflects worries about enterprise solvency as well as worries about political stability in urban areas. Staple price rises in many countries have led to urban riots, and the soccer riots of May, 1985 in Peking reminded the Chinese that they could have similar problems.

As a result, efforts to control inflation have included maintenance of inventories to meet runs on supplies, imports of critical goods and materials, and above all, direct control of prices through monitoring and criminal sanctions. In particular, prices of urban staples are closely watched. At the same time, public relations efforts have been carried out to explain the need for "price adjustments," which are good, and which are contrasted with "inflation," which is bad. In fact, it is not uncommon in street conversations to be told that even though some prices are higher, at least you can get the goods when you want them.

PROBLEMS

The major problems in commerce and pricing revolve around the rapid commercialization of the economy while prices are still poor guides to the scarcity and cost of goods and services. Additionally, as free market traders bid materials away from traditional users, which cannot adjust fast enough to afford the higher costs, subsidies and the threats of bankruptcy have increased, with potential for serious unemployment possible in some locals. Finally, an important exception to the program of commercialization is the relatively slow progress being made in labor markets.

By far the most serious problem is the pattern of output irrationalities which are caused by price irrationalities in the new environment of profit incentives and individual management. The decline in vegetable availability in Peking was one celebrated example, which had to be corrected with price adjustments and further commercial reforms. Another important example is pork, which for several years has had low output because of what farmers considered unsatisfactory prices. In industry, the problem has been the reverse. Consumer manufactures' traditional high prices have falsely encouraged investment and output of low quality goods for which there is no market. Again, the price irrationalities have brought about production irrationalities. In fact, however, this problem may be one step in the solution of the general pricing problem, because the output irrationalities should, in time, bring about price adjustments.

Although 1985 has seen labor wage reforms, in general, Chinese labor is allocated to enterprises, and there is still very little freedom to leave one job in search of another. Similarly, although the October, 1984 urban reform document implemented management rights to hire and fire, in actual practice the process has been introduced only very slowly, and there have been no reports of a general freeing up of labor mobility. One sign of flexibility in addressing this very important difficulty is the growing importance of merit bonuses, which, less dramatically than hiring and firing, still provide management leverage over worker performance.

In sum, the problems of price reform and commercialization are paradoxical. On the one hand, changes are too slow, but on the other, they are too fast. This whole issue is undoubtedly one of the most difficult and subtle problems facing China, and the solutions, as they unfold, should give a good indication of the success of the overall reform program.

PROSPECTS

Overall, the prospects for 1985 are for even more accelerated commercial expansion and for double-digit inflation. Not all of this inflation will be reflected in official price indexes, but the official measures will be quite high as well.

The prospects for continuing commercial expansion are supported by several basic underlying facts about China's current economic development: the rapid urbanization of the population, the underlying egalitarian asset distribution in rural areas, the good prospects for increasing managerial decentralization in industry, and the overall rapid pace of industrial growth.

China's population will be more than 50 percent urban by 1988 or 1989, reflecting a process ~~of~~ rapid change in population life styles and commercial dependence. Towns and cities are centers of commerce, and as China's rural population leaves the family land to arrangements of shared management and moves to cities, the level of commercial participation nationwide will continue its very rapid rise. Because the recent rural reforms have given households their own lands and herds, migrants to towns, and peasants living in towns which are upgraded to cities will not be paupers. Rather, the new urban populations will have assets and family sources of income, unlike urban populations in so many poor countries. These factors point to the good potential for gradual emergence of an urban middle class and active commercial development.

In industry, the investment boom, imports of investment goods, and rapid price rises in industrial materials all point to some significant success by enterprise managers in gaining control of their businesses. Given the determination of national leadership in carrying out the urban reforms and their success in solidifying national leadership positions at the party meetings in September, 1985, continued decentralization of industrial decision-making is virtually certain. In this environment, competition for inputs, capital, and markets should continue to expand horizontal industrial commercial relations, and at the same time prod price changes in directions reflecting scarcity and usefulness.

Although inflation in 1985 is likely to be quite high by historical Chinese standards, 1986 will probably see a slow-down in the rate of increase. The major reasons are the slowdown in industrial growth in general, and the better control over the money supply following this year's bank reforms and the smaller anticipated fall, 1985 harvests. Agricultural procurements are a major vehicle for introducing currency into the economy. Nevertheless, price adjustments will continue for the foreseeable future, but the degree of their success in becoming accurate guides to decentralized decision-makers is still uncertain, a critical question for the overall success of the urban and industrial reform movement.

CHAPTER TEN - Transport

EXECUTIVE SUMMARY

TRENDS	*** Despite growth in recent years, shortage of transport capacity is a bottleneck throughout the economy.** *** Increase in private vehicles is the most dramatic development in transport with 240 percent growth from 1983 to mid-1985.**
POLICY	*** State policy encourages local investment in road and air transport, while state investment continues to favor railways.**
PROBLEMS	*** Low levels of investment and poor use of existing capacity plague the transport network.**
PROSPECTS	*** Growth in highway transport is expected to be three times as fast as rail expansion.**

TRENDS

The 30 percent growth in transport from 1980 to 1984 represents a significant effort in investment and technical improvement. However, it has been inadequate to deal with the shortage of transport capacity, which has become one of the obvious obstacles to more rapid growth. Throughout the transport sector there is congestion and inadequate construction and production. Facilities are not expanding as rapidly as needs are. As a result, transport is a bottleneck for movement of coal from mine to user, for shipping agricultural and light industrial products from rural to urban areas and for the delivery of imports and exports. Production outside the state plan, especially in rural industry, whose production rose 37 percent in 1984, is particularly hard hit since it receives low priority access to state transport facilities. The congestion at ports has resulted in large demurrage charges.

Growth in transport has not kept pace with the overall industrial expansion over the past five years, and it is below what would be expected of a country in China's stage of development. Cargo transport has expanded even more slowly than passenger transport, which is low relative to other developing countries. In spite of growth in recent years, the average mobility of people in China is still very low, 270 passenger-kilometers per capita in 1982 versus 785 in India.

Rail in China has the largest share of freight traffic of any country in the world, although its share was reduced from over 80 percent in 1950 to 50 percent in 1984. Conversely, only the USSR has a lower share of road transport because of the heavy usage of pipelines. Data on the relative importance of the different modes of transport over the past five years are found in Table 10-1.

Both the location of natural resources relative to population and markets, and the state's emphasis on heavy industry play important roles in determining China's transport needs. Heavy industry is more transport intensive than light, which in turn is more intensive than services. Movement of coal and timber accounts for over 40 percent of the ton-kilometers in freight traffic, due to the remote location of these resources. Commercial timber is found solely in the northeast. Similarly, despite deposits in almost every province, the most accessible and highest quality coal is located in the north and northwest, especially in Shanxi, far from the coastal industrial centers. Furthermore, production will probably become increasingly concentrated; coal from Shanxi and Inner Mongolia is expected to account for 60 percent of output by the year 2000.

The most dramatic development within transport is the growing importance of non-state owned vehicles in highway transport. Five years ago vehicles under the state highway department transported 33 percent of the highway freight by volume. In 1984 they accounted for only 21 percent of the total, due to the expanded role of non-state vehicles. Although a similar time series is not available for passenger transport, the establishment of local bus companies and emergence of private vehicles indicate the growing dependence on highways for short distances. Employment in private transport businesses rose more than 40 percent in the first half of 1985 over the end 1984 level. With light industry and agriculture in the rural areas growing faster than the overall economy, demand for highway transportation is outpacing traditional capacity.

The responsibility system in rural areas and the encouragement of private marketing have generated a vastly increased demand for short distance travel. Roads now carry 70 percent of inter-city passengers but still only 31 percent of China's total passenger-kilometers. A survey this spring estimated that the freight volume of these individual and cooperative transporters now accounts for 10 percent of China's total freight volume. Passenger coaches and cargo trucks operated by individuals and cooperatives increased 240 percent from 1983 to mid 1985 to 173,000.

Air transport, which constitutes the smallest segment of China's transport, is growing the most rapidly. After 40 percent growth last year (see Table 10-1 below,) China's Civil Aviation Administration reportedly increased passenger and cargo shipments by 60 percent in the first quarter of 1985. Recent developments include the import of 20 large passenger aircraft this year by CAAC and other equipment purchases by local airports and the agreement with McDonnell Douglass to coproduce additional planes. The establishment of 6 independent regional airlines allowed to compete with the state's CAAC should insure continued strong growth.

POLICY AND REFORM

The major channels for increasing transportation's output level are increased investment from central, regional and individual sources. State policy is designed to promote that end in two dimensions: (1) direct investment in transport and (2), reforms providing indirect incentives through decentralization for investors at lower levels. Under decentralization, provincial and local governments are given more responsibility to invest in public facilities such as roads and airports. At the same time, enterprises and individuals have more incentive to invest in private capacity, particularly private trucks and buses. The state itself promises to invest heavily in transport in the next five years to increase rail capacity out of Shanxi and between major eastern cities, as well as to expand port capacities and develop some superhighways. Central authorities, including Hu Yaobang and Zhao Ziyang, insist that highways and waterways not be ignored while building airports and railways. However, the actual commitment of funds continues to favor railways. In 1984, 60 percent of the state's investment in transport and communications went to railways. While the total investment fund for 1985 is not yet known, investment in railways will reportedly be the highest in recent years at 7.4 billion yuan.

Responsibility for road investment, on the other hand, is being shifted downward. The central authorities stress the need for larger, more efficient vehicles and improved road construction in order to make highway transport more economical than railway, as it is in most developed countries. To date, however,

Table 10-1
CARGO AND PASSENGER TRANSPORT, 1980-1984

(Item)	(Units)	1980	1981	1982	1983	1984
Cargo Transport (Total)						
	......(billion ton-kilometer)	1,203	1,214	1,305	1,404	1,569
	.............(percent growth)	5.6	1.0	7.5	7.6	11.7
Cargo Transport (State)						
	......(billion ton-kilometer)	1,152	1,162	1,240	1,330	1,451
	.............(percent growth)	5.6	.9	6.8	7.2	9.1
by Railway						
	......(billion ton-kilometer)	572	571	612	665	725
	.............(percent growth)	2.1	-.1	7.1	8.6	9.0
by Highway (Total) *						
	......(billion ton-kilometer)	76.4	78.0	94.9	108.4	153.6
	.............(percent growth)	2.6	2.1	21.7	14.2	41.7
by Highway (State)						
	......(billion ton-kilometer)	25.5	25.3	30.3	33.5	35.9
	.............(percent growth)	-4.9	-.8	19.8	10.6	7.2
by Waterway (Total)						
	......(billion ton-kilometer)	505	515	548	579	634
	.............(percent growth)	10.7	1.9	6.4	5.7	9.5
by Ocean Waterway						
	......(billion ton-kilometer)	353	364	377	398	437
	.............(percent growth)	11.2	3.2	3.5	5.5	10.0
by Air						
	......(billion ton-kilometer)	.14	.17	.20	.23	.31
	.............(percent growth)	16.7	21.4	17.6	15.0	34.9
by Pipeline						
	......(billion ton-kilometer)	49	50	50	52	57
	.............(percent growth)	3.2	1.6	.4	4.6	9.2
Cargo Handled at Major Seaports						
	...............(million tons)	N/A	219	238	250	276
	.............(percent growth)	N/A	N/A	8.4	5.0	10.4
Passenger Transport						
	..(billion person-kilometers)	228	250	274	310	362
	.............(percent growth)	15.9	9.6	9.8	12.8	16.9
by Railway						
	..(billion person-kilometers)	138	147	158	178	205
	.............(percent growth)	13.7	6.5	6.9	12.8	15.2
by Highway						
	..(billion person-kilometers)	73	84	96	111	134
	.............(percent growth)	20.9	15.1	14.9	14.7	20.9
by Waterway						
	..(billion person-kilometers)	12.9	13.8	14.5	15.4	15.3
	.............(percent growth)	13.2	7.0	5.1	6.2	-.6
by Air						
	..(billion person-kilometers)	4.0	5.0	6.0	5.9	8.3
	.............(percent growth)	14.3	25.0	20.0	-1.7	40.7

* Note: The Total transport and total highway transport include freight carried by vehicles not under the highway transport department. 1984 also includes private transport.

SOURCES: Official yearbooks and releases. (J5CBT06b.d5h) the state has only committed itself to superhighways and to providing grain, cloth and cotton to provinces building highways using peasants receiving relief. In 1984, the state decided to put 2 billion yuan worth of these goods into building roads and bridges, materials of which the state has stockpiled considerable surpluses.

Even more than rail and roads, ports and harbor facilities have been unable to match the transport needs associated with China's new economic policies. The rapid growth in foreign trade, especially in the 14 coastal cities opened to foreign investment, is straining port facilities. By late June of 1985, the government reported more than 380 foreign ships nationwide unable to unload their cargo due to limited berths and warehouses. The state has promised to invest heavily in the coastal infrastructure to relieve the congestion. Further, the government advises the cities, trading companies and interior provinces to participate in building docks. It is also suggested that preferential treatment be given to overseas firms willing to invest in China's ports. For the short term, it was announced in July that port authorities have been instructed to fine importers who fail to move their goods on time. Failing that, as a final measure, the government has confiscated the goods of delinquent enterprises.

Table 10-2

CAPACITY GROWTH AND CAPITAL CONSTRUCTION IN TRANSPORTATION, 1980-1984

(Item)	(Units)	1980	1981	1982	1983	1984
Increased Production Capacities:						
New Railroad Lines	............(kilometers)	1,008	3	31	601	1,247
Double Tracks	............(kilometers)..............................					584
Electrified Tracks	............(kilometers)..............................					695
New Highways	............(kilometers)	3,036	1,554	751	1,462	1,443
Port Cargo Handling	..........(million tons)	5.24	2.36	20.00	17.73	7.18
Capital Construction						
Total Chinese Capital Construction, All Sectors	..(billion current yuan)	55.9	44.3	55.6	59.4	73.5
	........(percent growth)	6.8	-20.8	25.4	6.9	23.7
Transport & Telecommunications Sectors	..(billion current yuan)	6.2	4.0	5.7	7.8	10.8
	........(percent growth)	-2.7	-35.1	41.4	36.4	39.0
Transport's share of Capital Construction	...............(percent)	11.1	9.0	10.3	13.1	14.7

Sources: Official Yearbooks and releases. J5CB06a.d5h

PROBLEMS

As discussed above, poor transport facilities pose serious impediments to China's continued rapid economic development. At the same time, a variety of extremely difficult circumstances impedes the development of transport itself. One problem only gradually being overcome is the lack of perception that transport IS a priority investment area in spite of official statements. It universally receives too few resources in developing countries because it is difficult to see or measure their benefits. In China, the situation is compounded by the low esteem in Marxist ideology for service industries which produce no "commodities." Ideology is being played down in China. Nonetheless, 3-4 percent growth is considered acceptable rather than 10-20 percent growth which is the norm in other industrial sectors and may be what is needed in transport. Major investments are needed to increase transport capacity and avoid stifling economic growth. In past years investment in transport has averaged about 1.1 percent of GNP, which is low compared to other countries, Brazil, for example spends 3.3 percent on transport. The scale of future investment could bring it up to double the current rate.

Inefficient use of the existing capacity plagues the transport network. The level of on-site processing for both lumber and coal, which together account for 40 percent of freight traffic, is very low by international standards. It is estimated that raw logs require 35-40 percent more rolling stock than would sawn timber, which leaves considerable room for savings. Likewise, while Japan and western European countries washed or screened over 85 percent of their coal in 1982, China's level was only 18 percent. Thus scarce transport facilities are squandered carrying ash, stones and other impurities to industrial destinations where they are of no use. Another example of poor allocation of transport resources is the excessive reliance on trains to handle inland distribution from seaports. Except for Shanghai and Huangpu harbors, all harbors currently rely primarily on railways to distribute cargo. Railway transport accounts for more than 90 percent in the northern most harbors, 60 percent in Qingdao and 70 percent Tianjin respectively. Railway capacity is saturated, but many auto transport departments in the same areas have surplus transport capacity and lack cargo sources. One facet of relieving the backups at the harbors, therefore, is improving the inland distribution system, shifting toward road vehicles and upgrading access to the port cities.

Shortage of roads and the poor quality of the existing ones are two additional problems for highway transport. Urban traffic, particularly in large and medium sized cities is increasingly congested. Urban road construction cannot keep pace with the increasing number of vehicles. For example, since 1949 roads in Peking have increased 12.5 fold while the number of motor vehicles rose 65 fold and the number of bicycles 31 fold. In recent years the situation has been aggravated by agricultural trade markets and commercial outlets setting up on roadways. However, efforts to alleviate the congestion were unsuccessful when a ban on trucks from outside Peking this spring lead to a severe vegetable shortage in the capital city and the ban had to be lifted.

Similarly, in densely populated areas obtaining the rights of way for land needed for new road construction is difficult. In such a land-poor country, adequate compensation is hard if not impossible to assess. These problems and the lack of state investment have slowed the pace of road construction considerably over the past five years. Moreover, according to the Ministry of Communications most of the 910,000 kilometers of highway throughout the country are of low standard and poor quality.

Administrative problems also hamper the development of highway transport. The decentralization of road construction responsibility is not likely to improve the quality of the roads, since many localities lack the technology that the central authorities can employ. Overlapping organizations and multiple layers contribute to inefficient planning. Also, funds collected as road maintenance fees are used for other purposes.

The vehicles themselves present their own problems. Present truck production would just cover renewals of the fleet in the basis of a ten year life cycle. Since traffic is increasing, vehicles are kept longer, but still the domestic supply cannot provide enough vehicles. The scarcity has lead to a rapid increase in vehicle imports. In the first half of 1985, imports of cars increased 725 percent and trucks rose 536 percent over the same period in 1984. The lack of horizontal contact between infrastructure agencies and with vehicle manufacturers exacerbates the problems of roads and vehicles. For example, it is recognized that larger trucks would be more efficient than the current four to five ton capacity models, but the roads and bridges are too poor to handle them. The production of rolling stock and locomotives faces the same dilemma. In recent production has only been able to meet half the combined need for replacements and new additions. To supply short-term needs, imports may have to be considered for both rolling stock and locomotives until local production capacity can be increased.

PROSPECTS

Prospects in transport are for significant but not explosive growth by 1990 with total freight ton kilometer growing an average of 8-9 percent. With increasing per capita income, passenger transport will grow even faster than freight at an estimated 10 percent per year. The Ministry of Communications anticipates that by the year 1990 highway and waterway freight volume will be 1.82 billion tons, up from 836 million tons in 1984, which implies an average growth rate of close to 14 percent. Transportation volume by rail for both passenger and cargo is expected to grow at only 4 or 5 percent per year over the next 15 years. Despite some potential rationalizations, freight needs are expected to grow as fast as output in agriculture and industry. Hence, even if highway freight increases at a more modest 12 percent, by the year 2000 the share of road transport could increase to 20 percent of domestic ton kilometers, from around 10 percent in 1984. In terms of traffic, the official Seventh Five Year plan calls for 15 percent annual growth for highways, and only 5.4 percent annual traffic growth overall. In sum, the transport system is expected to become slightly less concentrated in rail during the next 15 years.

In light of stated highway traffic goals, existing roads are clearly insufficient and transport officials have announced an ambitious program of new road and highway construction. This includes plans to build 11 major motorways in the next five to six years in Shanghai, Nanjing, Shenyang, Dalian, Hangzhou, Ningbo, Qingdao, Lianyungang, Tianjin, Peking, Guangzhou, and Zhuhai. Completion will bring the total length of motorways and 24-meter-wide first-class roads to 2000 kilometers from almost none five years ago. In another project, a high-grade expressway will be built from Shenyang to Dalian, to be completed by 1990 with investment to total 2.02 billion yuan, 300 million annually starting in 1985. Officials estimate that this will decrease transport costs between these cities by 40 percent.

Success in increasing the share of road vehicle transport will require making adequate fuel supplies available. Supplies of liquid fuel are already very tight and in some cases shortages are constraining the use of vehicles. Even with improvements in fuel efficiency, consumption in the year 2000 could be 3-5 times higher than in 1980, or 30-50 million tons. Thus far the state has given priority to liquid fuel as a foreign exchange earner, emphasizing domestic substitution of coal for oil, which is of course no help for road transport.

Freight rail transport expansion is expected to be concentrated on double tracking, electrifying tracks, and on new railroads out of Shanxi to alleviate the delays in coal transport. A new railway trunkline is already under construction from Datong in Shanxi to Qinhuangdao with modern technical equipment, primarily for coal transport and heavy-load train operation. The western section, 357 kilometers of double-track electrified railway, should start transporting coal in early 1987. The rest will initially be single-track and should be completed in 1991.

Extensive development of China's waterways is planned for the next five years. Harbor traffic volume is planned to be up 61 percent in 1990 from 1985, under the seventh five year plan. 120 deepwater berths and 36 medium and small berths will be built, bringing the total number of coastal harbor berths to 542 from the current total of roughly 390. Construction of port facilities will be focused on transport of energy related materials and foreign trade commodities, including expanding capacity for coal produced in the north to the south and building berths for containerized liners. The container transport capacity should increase from 850 thousand to 1.3 million standard containers by 1990.

Inland waterway development will focus on the network of waterways linking the Yangtse River, Pearl River, Heilong Jiang, Grand Canal and the Huai He. Plans call for the removal of 180 locks and the improvement of 10,000 kilometers of channels to make 7,000 kilometers navigable for barges over 1,000 tons.

CHAPTER ELEVEN - Population

EXECUTIVE SUMMARY

TRENDS	*** Migration and definitional changes are speeding urbanization.** *** Continuing state control over family structure is evidenced by the reduction in China's natural rate of population increase.**
POLICY	*** The state is implementing a national ID card system as a population control measure.** *** Self-employment is encouraged as a method of reducing urban unemployment and under-employment.**
PROBLEMS	*** An even stricter political system will be needed to discipline China's large population in the face of rapid change.** *** The labor force is aging rapidly and a comprehensive retirement system will be needed to support the growing number of elderly.**
PROSPECTS	*** The demand for more family members as individual prosperity is encouraged will make slowing population growth difficult.** *** The urban population could be 70 percent of the total by the year 2000.**

TRENDS

China's population growth rate, down to 10.81 per 1000 in 1984, is lower than that of most other Third World countries, but it must drop even further if economic gains are to have their planned significance. A rate of 10 per 1000 must be achieved if the government is to hold the population to 1.2 billion by year 2000. A national ID card plan, aimed at preventing migration and controlling accelerating urbanization, is already being implemented in China's largest cities. The one-child policy, which will help China achieve its target population of 1.2 billion in the year 2000, will also accelerate the rise in the average age of the population. This will compel the State to devise a costly retirement system and an expanded health care program to support the growing number of elderly people.

China's population at the end of 1984, based on a sample survey conducted that year, stood at 1.036 billion people, or 22 percent of total world population. China's estimated 1984 population of 1.036 billion indicates a population growth rate in 1984 of 10.81 per 1000, slightly higher than the goal of 10 per 1000 announced at the implementation of the one-child policy in 1979. China's average annual population growth rate for the ten years from 1973 to 1983 was 15 per 1000; therfore, the 1984 population growth rate of 10.81 per 1000 indicates substantial progress in reducing population growth in the last few years. And when compared to population growth rates of other Third World nations listed in the table below, China's 1984 population growth rate of 10.81 per 1000 is much lower than Kenya's growth rate of 40 per 1000 and India's growth rate of 23 per 1000. It is only slightly higher than the population growth rates of industrialized nations such as the United States at 10 per 1000 and the Soviet Union at 9 per 1000.

Table 11-1
WORLD POPULATION COMPARISON

Country	Population 1983 (millions)	Average Annual Population Growth Rate 1973-1983 (per 1000)	Fertility Rate 1983	Life Expectancy at Birth 1983	Urban Population Share 1983 (percent)
China	1019	15	2.3	67	21
India	733	23	4.8	55	24
Brazil	130	23	3.8	64	71
Korea (South)	40	16	2.7	67	62
Indonesia	156	23	4.3	54	24
Kenya	19	40	8.0	57	17
Japan	119	9	1.7	77	76
United States	234	10	1.8	75	74
France	55	4	1.8	75	80
USSR	273	9	2.4	69	65

Source: "World Development Report", The World Bank, July 1985, pp. 174-217.

Even though China's population growth rate has been falling since 1981, it must reach the 10 per 1000 figure and remain there every year until 2000 if the goal of holding the population to 1.2 billion in that year is to be achieved. China's fertility rate, already low at 2.3 children per woman when compared to India's 4.8 and Brazil's 3.8, must drop below the replacement level of 2.1 children if population growth is to continue to decline from now until the year 2000.

The present rural/urban population growth rate differential makes holding the overall growth rate to 10 per 1000 much more difficult. Since 1976, the urban growth rate has ranged from 6.5 to 13 per 1000 while the rural growth rate has ranged from 12 to 15 per 1000. In 1983, urban growth was 10.07 per 1000, but rural growth was 12.2 per 1000. Because the rural population of China in 1983 accounted for 76.5 percent of the total, the relatively high rural growth rate is a hindrance to the achievement of an overall growth rate of 10 per 1000. Continuing urbanization, planned and unplanned, is one factor that will contribute to reduction of the overall growth rate, but only the reduction of the higher growth rate of the large rural population will slow population growth significantly.

More significant than China's overall population growth rate is the remarkable surge in urban population which began in 1979 and accelerated markedly in 1983-84. The urbanization that normally accompanies industrial development was long delayed by Maoist policies, but has now resumed due to recent economic and social reforms. The rapid growth of the urban population during the last few years is much less the result of the heavy rural-urban migration so common in other poor countries than it is the result of administrative changes: redefinition of rural counties as towns and the enlargement of traditional urban boundaries to include the surrounding populations. There has been some degree of actual migration, as evidenced by scattered reports of rural workers in urban industry, but reliable data are not yet available.

Table 11-2
RURAL-URBAN MIGRATION, 1971-1984

	Population Growth			Apparent In-Migration		
	Total	Urban	Rural	Urban	Rural	Statistical Discrepancy
(Percent)				(Millions)		
1971	2.70	1.99	2.84	.57	2.84	3.01
1972	2.29	1.52	2.44	.18	.84	.59
1973	2.33	2.75	2.25	2.25	.33	2.13
1974	1.85	1.63	1.89	1.08	.24	.89
1975	1.72	2.79	1.50	2.90	-1.22	1.35
1976	1.40	1.94	1.29	2.06	-.45	1.27
1977	1.34	2.01	1.20	1.99	-.49	1.27
1978	1.35	3.46	.91	4.35	-2.69	1.45
1979	1.33	7.25	.04	11.02	-9.18	1.65
1980	1.19	3.66	.66	4.84	-4.58	.05
1981	1.38	5.22	.42	8.15	-8.59	-.69
1982	1.47	4.87	.61	7.22	-7.10	.19
1983	.94	14.05	-2.51	27.59	-29.99	-2.18
1984	.96	36.81	-10.08	na	na	na
(Millions)						
1984	1,034.75	330.06	704.69			

*NOTE: Apparent migration is calculated from birth and death rates. The statistical discrepancy between urban in-migration and rural out-migration estimates is due to inconsistencies in the official data themselves.
SOURCES: Official State Statistical Bureau data. (J5AD19/B.DOC, J5AD19/A.DOC, J5AD41.T5J)

The statistics in Table 11-2 give a dramatic illustration of the extraordinary shifts in favor of urban living. The number of people in cities and towns has grown much more rapidly than would have been the case without migration and the creation of new urban areas. In 1983 and 1984 the population living outside cities and towns actually declined. Official data on births and deaths permit the calculation of apparent migration flows, and the shift in 1983, the last year for which migration data are available, affected nearly 30 million people. Without further information, it is difficult to know the share of these shifts resulting from population movements and the share due to extension of urban boundaries. However, the State Statistical Bureau reported that the sharp increase in urban population was due primarily to the "many newly-established towns resulting from readjustment in the criteria for determining urban towns." Whatever the urban/rural population mix is at this point, the status of China's population is clearly in a state of rapid flux.

Rising urban population figures since 1981 are the result of definitional and developmental changes: an increase in the number of small and medium sized cities brought about by the state's encouragement of development outside the already overcrowded areas, and a broader, more realistic definition of "urban areas" used for the first time during the 1982 national census. The State Council now approves redefinitions of numerous rural towns and counties as cities as they become more urbanized. In addition, rural-urban migration continues, though officially prohibited, as discontented youths return from the countryside where they were sent during the Cultural Revolution. In April, hundreds staged a demonstration in Peking, demanding that they be allowed to return from the countryside to live in Peking permanently. The group said it represented 20,000 such people still living in Shanxi province. Despite the possibility of hundreds of thousands of "sent-down" persons flooding the cities if the resettlement policy were to be relaxed, Peking city authorities in this instance conceded by allowing certain categories of youths to apply for jobs in the city.

As a result of the reforms, China is now following the development pattern of the national economies known as "early industrializers." The historical experience of such economies showed a progression from an economy dominated by agricultural employment to one dominated by manufacturing employment. In China, the growth of rural village industry, 48 percent in 1984, shows that the transition of labor from the agricultural sector to the manufacturing sector is already underway. And as rural residents establish transportation, commercial, and repair services, labor will also shift out of agriculture and into the service sector.

The notable increase in the number of self-employed persons is indicative of China's very special transformation from a centrally planned command economy to a decentralized economy depending on individual incentives and profit motivation. In 1984, there were almost 3 million self-employed workers in cities and towns, roughly 30 percent more than there were in 1983. The number of self-employed workers will continue to rise as the state allows more private enterprise and exhorts the people to "get rich".

Regional differences in sectoral employment are expected to become more pronounced as certain areas develop faster than others. Currently, a lower percentage of the workforce is employed in agriculture in the coastal and industrial regions than is employed in agriculture in the less-developed interior. Even though there have been reports in the Chinese press stating that development priority should be given to the western provinces, especially Xinjiang, development efforts there have been largely political. And the recent decision to de-emphasize development in all but the four largest of the fourteen coastal cities shows that it is the traditionally most successful coastal regions that have been targeted for foreign investment, technical progress, and rapid development.

POLICY

China has implemented policies to control population growth, restrict migration to the cities, create jobs for all who are employable, and avoid unemployment in the politically sensitive urban areas. As the Maoist system of ration coupons and state employment dissolves, the recently-announced national ID card plan will allow China to maintain and strengthen its control of the population's movements and activities.

China'a ambitious population control plan, under which every couple would be allowed to have only one child, was announced in 1979. The one-child policy was intended to be a temporary restriction on family size, allowing the state to slow population growth which, if unchecked, would threaten to negate planned economic gains. The intent of the one-child policy has not changed, but such a strict policy contradicts a fundamental long-run goal: a population in future decades that has a balanced age structure and a stable labor force composition. Over-zealous population control now will cause a shortage of young workers in the future.

To cap population at 1.2 billion by the year 2000, Chinese demographers, some of whom suggest an "ultimate" Chinese population of 700 million, realized that it would be necessary to hold the annual population growth rate to 10 per 1000 for the last 20 years of this century. This would require holding the fertility level below the replacement level of 2.1 children per woman for many of those years. The one-child policy was designed to reduce fertility quickly and dramatically so that overall population growth could be centrally controlled. Even though overall population growth has slowed, China's fertility rate was still above replacement level in both 1982 and 1983 at 2.3 children per woman.

The one-child policy could enable China to reach its population goal of 1.2 billion people in the year 2000; however, even the low growth rate of 10 per 1000 required to meet that goal is still considered too high by some Chinese demographers. Those who have pegged the ultimate Chinese population at 700 million are, in effect, advocating a negative growth rate for many years. The result of such a policy would be an even more dramatic and undesirable impact on China's age distribution than the one-child policy or the current low growth rate are going to produce.

A serious policy conflict has arisen as the unintended effects of the one-child policy and the agricultural reforms have come to light. Peasants, whose birth rate was already much higher than that of urbanites when the one-child policy was announced in 1979, were given "private plots" and the freedom to sell their surplus produce in free markets when the agricultural refoms were implemented. They immediately realized that they could enrich their families faster if there were more family members to work the land. So they ignored the one-child policy or found ways to subvert it. There were even reports of rural cadres, who were and still are in charge of enforcing the one-child policy, having larger families to help farm their own private plots. Due to conflicting incentives then, rural residents have resisted the implementation of the one-child policy as their standard of living has continued to rise. Such a situation has created the potential for explosive population growth because both the rural birth rate and rural population are much higher than the urban birth rate and population. The government has addressed this problem by stepping up urbanization, either by definitional or boundary changes, by tacitly allowing "sent-down" persons to return to the city (and in some cases creating jobs for them), and by adjusting the marriage ages.

There have been unconfirmed reports that the government has relaxed the one-child policy in rural areas in an attempt to accomodate the vast Chinese rural population that, now more than ever, wants larger families. As an example, it has been reported that rural families whose first child is female may be allowed to have a second child in some cases. It is not known, however, how widespread such relaxation practices have become.

In an effort to control migration to existing urban centers, the State has devised a national identification card system that met with success in a pilot project in Peking last winter. It is now being implemented in the larger cities. One of the stated goals of the national ID card program is to ensure "the management of population with modern technology." Currently, each household has a "record of domicile" registration which can only be used locally to prove residency. The national ID card will allow the central government to restrict illegal migration of rural families and individuals to urban areas by recording each person's residence on a nationally recognized card.

For the past 20 years, China's population has been urbanizing despite statistics that have indicated only very slow growth of the urban population. This under-reporting of the urban population was mainly due to unrealistic definitions of "urban areas" which failed to include densely populated regions just outside city boundaries as part of metropolitan areas. By the early 1980's, though, suburban and rural areas that had become increasingly urbanized, especially rural districts close to cities and towns, were redefined as urban areas themselves. The redefinitions caused urban populations figures to be revised upward as far back as 1965. A different type of redefinition is now occurring throughout China's countryside. During the past few years, the State Council has been approving the consolidation of many rural counties and towns into cities. The effect of this policy has been to increase the urban population on paper and to bring the reported urban population figure closer to the true urban population, which is increasing even more rapidly as a result of the economic reforms.

PROBLEMS

Controlling the growth of a population already in excess of 1 billion people creates a host of problems, not the least of which is the possibility that such a huge population cannot be controlled. Chinese officials have already shown that they are determined to slow population growth, and they have produced remarkable results. Yet, the maintenance of a strict political system that will be required to discipline such a large population in the face of rapid economic and social change, the population's changing age structure, the composition of the labor force, and the prospect of a society with a great number of only children are all problems that Chinese planners will have to face in the next few decades. Chinese planners and statisticians, as they become more sophisticated in their knowledge and management methods, will have to exert increasingly greater control over an expanding population and labor force if China is to modernize in their lifetimes.

In order to slow population growth, the state will have to exercise even more pervasive control in the coming years. New methods of control will have to be devised to counter the efforts of those couples who desperately want more than one child, and who have found loopholes in the one-child policy. For example, there have been reports of workers gaining temporary employment outside their registered residence and giving birth to additional children while away from home.

Strict population control policies can have adverse political effects at home and abroad. Chinese who sympathize with the family planning policy, including many young urban couples, worry that Communist Party hard-liners who oppose Deng may someday accuse him of sacrificing future generations to his "bourgeois" economic goals. If it is found that China's population control policies are too strict or include forced sterilizations or abortions, there could be a loss of international prestige. A side-effect of the one-child policy carried to excess could be a resurgence of female infanticide.

Even if the one-child policy were to be relaxed soon, the rising average age of the population will lead to serious problems in the areas of health care, retirement benefits, and labor force composition throughout the next several decades. There is already concern that the proportion of elderly dependents in the population will temporarily bulge above its ultimate long-term level. Chinese demographers say that the one-child policy could cause that proportion to reach one third of the total population within 50 years. Yet, there is official encouragement for self-reliance in family care for the elderly, in direct conflict with the one-child policy now in effect. The government has assured parents of only children that there will be a retirement system in place by the time they need it, but it is difficult to see how China could fund a retirement system given the present unfavorable demographic situation. Many Chinese already fear that the typical family of the future will consist of a single child, two working-age parents, and four grandparents, all supported by the two family workers.

The one child-policy threatens to alter dramatically the structure and productivity of the nation's labor force well into the next century if it is enforced much longer. The long-term effect of such a policy could be a shrinking labor force that would, in turn, imperil the modernization program. Prolonged very low fertility could cause a rise in the average age of the labor force and create shortages of younger, better and more recently trained, more adaptable workers. Then, not only would the labor force become older and less adaptable to change, but the vast number of new retirees would also have to be supported by fewer, yet supposedly more productive, young workers. One has to question whether such a situation is possible given China's current education and training system. In late July, it was reported that only primary schooling was universal in Peking but that by 1990 all of the city's youngsters should receive a senior middle school education. One result of such an inadequate education system is an illiteracy rate in 1982 of 32 percent of the population over 12 years of age.

Agricultural reforms have spawned a rural class structure that is developing rapidly. There are now "specialized" households in the countryside with access to better land, equipment, and economic opportunities. This situation, coupled with limits on migration, causes illegal movement to nearby cities and towns where peasants have become a subclass of contract workers without the privileges enjoyed by urbanites. When food prices were hiked in Tianjin recently, non-urban contract workers rioted because they did not receive the bonuses that urban residents were given to offset the price rises.

Peasants have found it possible to live in the city as a result of new economic freedoms and improvements in transportation. Now that there are free markets in the cities, one does not need food coupons to buy food there. Now that enterprises can hire contract labor, one does not need an official position to earn money in the cities. (In an attempt to prevent urban enterprises from luring chearer labor from the rural areas, however, the state has indicated that urban enterprises hire only urban residents on a contract basis.) So in order for the state to prohibit migration and limit the growth of existing urban centers, it will have to carefully monitor housing or enforce draconian check systems like the "pass" in South Africa. As a result, urbanization will probably have to be more rapid than Chinese planners foresee.

PROSPECTS

China's total population is likely to exceed the target of 1.2 billion in the year 2000, given relatively high rural population growth and the unlikelihood that the overall population growth rate of 10 per 1000 can be reached immediately and maintained for the next 15 years. Although rural population growth fell from 15 per 1000 in 1981 to 12.2 per 1000 in 1983, further reduction may be difficult to achieve in the face of reforms that unintentionally create the demand for more family members in the countryside. One must bear in mind, however, that the government has made great progress in controlling population growth since population control became government policy after Mao's death in 1976.

As a result of reforms already underway, the urban population could reach 70 percent of the total population by the year 2000, up from 31.9 percent in 1984. And in spite of policies which prohibit migration, Chinese officials expect that more than one third of the urban population in the year 2000 will have migrated from the countryside. Relaxation of urban employment and marketing practices will be responsible for some of the migration. In addition, some of the growth of the urban population will be due to the redefinition of dense rural areas and the creation of smaller cities and towns in the countryside where excess rural labor will find non-agricultural employment.

As the one-child policy is continued and smaller families are advocated, it can be expected that the proportion of elderly will eventually rise to 20 percent of the total population from today's 5 percent. Before that takes place, however, the state will have to establish some sort of social security system to allay the fears of parents of only children. The state health care system will have to be upgraded and expanded to handle to large number of older persons which, at 20 percent of the total population, could reach 240 million by the year 2000.

Social attitudes will change even more rapidly as the population grows and the economy modernizes. The traditional idea of submission to authority may already be changing in some one-child families as only children are given the best the family and the state have to offer. China's political system may have to yield to the demands of a population and workforce accustomed to the largest degree of individual freedom allowed in China since the founding of the People's Republic in 1949. Only children could become the type of people the population least adapted to life under a political system that demands conformity, ideological purity, and self-sacrifice for collective welfare.

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B8080-2-F -

China Economic Trends

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SPRING 1986

China Economic Trends

A Comprehensive Review and Forecast of Trends in China's Economy Through 1990 and Beyond

Spring 1986

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CHAPTER ONE - Introduction

The research results presented in this report review trends in virtually every major sector of China's economy. They imply that although China's economic growth will gradually slow and the reform movement will eventually moderate, China's economy in the late 1980s and early 1990s will be increasingly commercial and privately managed, and China by the year 2000 will have a GNP equivalent to Japan's today. In spite of the slowdown in China's economic growth late in 1985, both recovery in early 1986 and long-term economic trends since the initial implementation of reforms in 1979 show that official growth targets are conservative, as they have been in the past.

Keeping track of new trends and developments is difficult. The flood of information in the daily press has become so great, and the conflicting opinions so confidently argued, that relevant and significant developments are often not confirmed for a year or more, after careful research has presented the factual record in a meaningful way. The Rock Creek Research **China Economic Trends** report helps to shorten this period of uncertainty. **China Economic Trends** offers a thorough review of what is known about China's economy through the Spring of 1986, drawing conclusions about China's most likely future development path.

China's major recent economic trend has been the renewed growth of the domestic money supply in early 1986. This has helped industrial growth recover, after apparently successful government fiscal and monetary policies slowed overall expansion and reduced 1985's relatively high inflation. Grain price reforms and prospects for better weather promise a strong recovery from the 1985 decline in crop output. In international economics, concerns in 1985 that China would dramatically cut imports to correct for a large trade deficit were unfounded. China instead has used foreign loans to cover the deficit while promoting manufactured exports. Most importantly, throughout 1985 and well into 1986 reforms and experiments in economic management and policy have continued, in spite of the official position that 1986 would be a year of "consolidation."

In historical perspective, Deng Xiaoping's reforms and the economy's overall performance since the late 1970s represent a major break with China's Maoist past. Looking back even further to the late nineteenth and early twentieth centuries, it might be more accurate to say that Maoist China was a major stage in China's overall development process, bringing it from a protracted period of political decay, civil war, foreign invasion, and domestic collapse before 1949 through several decades of radical and excessive reforms. Ironically, and in spite of its excesses, this radical period laid a foundation for the current period of commercial and industrial expansion based on government "guidance," private incentives, and orderly international economic relations with the rest of the world.

Deng Xiaoping's economic and political reforms are dismantling Mao's centrally planned "command" economy faster than anyone had envisioned. The entire commune system is gone, and rural assets (land, animals, and machinery) have been turned over to individual farmers and their families. Nearly all industrial products have been removed from the central plan. In an increasing number of important dimensions, industrial enterprises are under the control of their individual managers. Profits, not fulfillment of physical output targets, have become the major criteria for industrial management success. Privately owned businesses have grown in number from 400,000 at the time of Mao's death to over 11 million by the end of 1985. Factories and construction companies have even begun selling negotiable bonds and securities, and bank branches have started experimental inter-bank lending at floating interest rates.

All of these domestic economic changes have forced the government to use increasingly indirect monetary and fiscal policies to influence the level of bank borrowing, growth of the money supply, overall demand, economic growth, and inflation. In numerous dimensions, Chinese economic policy is responding to cycles of industrial boom and slowdown just as policy in a market economy does, rather than resorting to the cruder commands of a centrally planned economy.

In terms of international trade, what was once a nearly closed economy now exports more than 8 percent of its GNP. What was once a centrally-rigged, subsidized foreign trade system is now so decentralized that state policy must manipulate exchange rates to discourage imports and promote export incentives for individual manufacturing enterprises. Foreign borrowing, lending, and arbitrage are increasingly common and are growing in sophistication. China has joined the World Bank, the IMF, and the Asian Development Bank, and is seeking GATT membership.

For China analysts, it is increasingly difficult to monitor all these changes and to evaluate which are legitimate and which are propaganda or wishfully romantic reportage. There are numerous sources of doubt and uncertainty about the health of these reforms and about the prospects for their success. Some of the concerns raised are legitimate and deeply rooted in fundamental characteristics of China and its economy, while others are based on short-term perspectives, partial truths, and limited familiarity with actual trends.

The most serious legitimate concerns for the success of Deng's program are brought on by the potential for political unrest in urban areas, as reforms raise food prices, close inefficient factories, and promote high private-sector incomes while state employee and party cadre salaries lag behind. Commercial freedoms allowing wholesale and retail independence immediately face a price structure inherited from Maoist China, which misleads producers and investors. Prices of scarce, much-desired comodities are too low and prices of plentiful low-quality goods are too high. Without this price structure, subsidies to many firms would have to be much larger in order to avoid worker layoffs and the unemployment currently unacceptable to Chinese policy-makers.

Price reform, in turn, can only proceed in inflationary cycles which risk urban political unrest, unless price subsidies--already large--continue to grow. In the short- and intermediate-term, official monitoring of market prices, periodic deflationary economic contractions, and price subsidies are being used to limit the inflationary impact of price reform policies. In the long run, however, the basic solution to problems of price reform, inflation, and price subsidies is increased productivity in industry, which in turn depends on price and management reforms. Success in these various reforms, then, requires their simultaneous implementation. The process is tricky and delicate. It requires good timing, attention to policy detail, a willingness to experiment, and the political strength to make mistakes and try something new. An important factor in this period of reform and economic transition, thus, is the quality of China's leadership and the political strength of the pro-reform elements among China's various power elites.

Very few specialists now believe that political opposition is strong enough to undo the reforms carried out so far, especially those in agriculture and commerce. Whether they involve internal political rebellion, military dissatisfaction, objections to "Western" morals and corruption, energy and transportation bottlenecks, or even the death of Deng Xiaoping, scenarios for undoing China's new organization are not persuasive and sound increasingly far-fetched.

A more immediate question is whether reforms can continue into new areas or whether they will stagnate. The concern most frequently voiced is that reforms will come to a standstill, unable to carry out their most difficult phase: the transformation of urban industrial enterprises into independent economic units with the freedoms to hire, fire, raise capital, set prices, and even go bankrupt if they are not successful. Resistance to these reforms understandably comes from the party cadres and government bureaucrats who oversee the traditional Chinese industrial ministries responsible for monitoring enterprises. These individuals, numbering in the hundreds of thousands, are literally fighting for their jobs. But there is an even more powerful coalition apparently arrayed against the cadres and bureaucracy, representing the combined forces of lower-level enterprise management and high-level national and provincial leadership. If there is a continued role for Deng Xiaoping, it is in adding to the strength of this coalition for reform.

However, explanations of China's prospects for reform success cannot be based only on narrow factional maneuvers and shifting coalitions. Much more fundamental forces seem to be at work--not only forces of fatigue with the past, but also forces of pride and hope that China can use its new system to attain goals its old system could not reach. Because of this, even Deng Xiaoping may no longer be essential. The promise of success is the strongest reason for China's leadership, whoever it may be, to consolidate the reform program and manage its evolution.

Success of the reforms is strongly influenced by a combination of fundamental conditions which make continued growth very likely. The most fundamental of these factors is the high quality of China's leadership, especially by Third World standards. Furthermore, China's labor force is literate and healthy. China has long experience with commercial and industrial management, again, especially by developing nation standards. The relatively egalitarian distribution of productive assets, especially agricultural land, can form the basis for an economic middle class. Central government control over individual enterprise management decisions is now already much weaker. Population growth has slowed significantly. China has a very strong natural resource base, not only in energy but also in metals and other raw materials. Large gains can be made from technology transfer, given China's relatively low starting position. China has strategic significance for major Western powers, which ensures their interest in development programs. Finally, there are many historical precedents in China for a period of sustained commercial expansion after epochs of chaos and consolidation. Given only a few of these factors, a country would enjoy good prospects for sustained development. China's endowment with all of them makes it difficult to believe that the current process will be easily stopped or undone by disruptive political elements.

Accounts in the media have exaggerated perceived political opposition to the reforms. Political, as opposed to economic, trends are difficult to measure, especially when freedoms of expression are in such a state of flux. The new "hundred flowers" campaign is encouraging new degrees of individual expression, and what may have been a significantly bold statement or publication a year ago might have very little national significance today. These political components of China's current transition are difficult to gauge directly, but economic components of programs already underway are increasingly well documented.

For China specialists, the most accurate measures of reform potential come from economic information. Economic trends are providing essential, no-frills verification of overall reform progress and their prospects for success. For even the most casual observer, recent changes in China's economy are too great to ignore. The proof of success or failure in economic reforms is found in the actual industrial, financial, trade, and farming trends observed month by month as they unfold.

The Rock Creek Research **China Economic Trends** Spring 1986 edition considers what China's economy has become and what it could be, in numerous dimensions, if current trends continue. Its ten substantive chapters and 58 tables review the most recent results for industry, energy, investment, banking, state finance, international trade, balance of payments, agriculture, commerce, transport, and population. All of these sectors are reviewed through the end of 1985, and many through the first quarter of 1986. At the same time, a computer model of China's economy, broken into 11 essential sectors, provides constant-priced and current-priced projections of China's economic future. The projections are not the mechanical results of a computer running itself. Rather, they are the result of painstaking consideration and evaluation, using the computer to maintain consistency among assumptions and technical economic requirements.

One conclusion that can be drawn from **China Economic Trends** is the abundance of reliable and useful data now available for China's economy. Historical data in the report are virtually all from official sources. In addition, numerous missions to China by international and government agencies, as well as the extensive statistical experience of Rock Creek Research staff, have verified Chinese methodology in collecting and summarizing statistics. By developing country standards, China's data are of high quality and are continuing to improve in both coverage and conceptual basis. The new Five Year Plan for 1986-90 has shifted from the Marxist measure of output, NMP (Net Material Product) to the Western measure, GNP (Gross National Product). (For China, GNP is virtually identical to a second, often preferred measure, GDP, or Gross Domestic Product.) China's economic statistics, rather than being a source of doubt about our knowledge of China's development progress, are increasingly a source for understanding and evaluating the success and pace of Deng Xiaoping's reforms.

Each of the chapters which follow has a similar format. After an EXECUTIVE SUMMARY, there are sections on TRENDS, POLICY, PROBLEMS, and PROSPECTS. Although no topic fits neatly into these four categories, they facilitate both the analysis of each sector and reference to the report's findings.

CHAPTER TWO — Macroeconomy

EXECUTIVE SUMMARY

TRENDS

* China's GDP growth recovered in the first quarter of 1986, following a marked slow-down in the second half of 1985.
* More than half of China's 1984-85 growth was due to very high levels of investment.
* Large trade deficits in 1985 and first quarter 1986 have driven down foreign exchange reserves and led to increased borrowing.

POLICY

* Fundamental management reforms transforming China from a centrally-planned economy to a market-oriented economy are largely responsible for the growth.
* China is continuing a process of conscious integration into the international economy.

PROBLEMS

* A foreign exchange shortage and energy and transport deficiencies remain constraints on China's development.

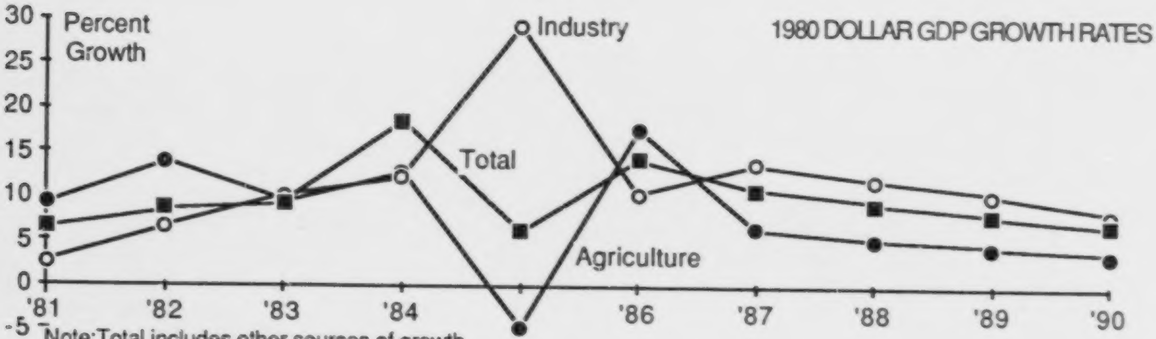
PROSPECTS

* By the year 2000, China will have a Gross Domestic Product roughly equal to Japan's today.
* Prospects are excellent for continuation of the reform program.

TRENDS

China's overall economy since the late 1970s has shown a very strong growth record punctuated by policy-induced slowdowns and occasional years of poor weather. Although the second half of 1985 was a period of both deliberate industrial contraction and reduced agricultural growth, data for early 1986 describe a strong recovery and a return to the rapid growth trends of the preceding several years. The sources of this growth lie both in relatively high rates of investment and in improved productivity from a number of sources. Most of the productivity increases, in turn, are in one way or another related to the remarkable program of economic, political, and social reforms carried out over the past 7 years, reforms which continue to evolve and mature.

Diagram 2-1



Note:Total includes other sources of growth.

The reforms, first begun in agriculture, are rapidly converting the foundations of the Chinese economy from its original centrally-planned Stalinist form based on physical output targets to an increasingly de-facto market economy governed by financial incentives. China's international economic relations have broadened rapidly, and China in 1985 and early 1986 showed itself ready to borrow for imports when export revenues failed to grow fast enough. Nevertheless, China remains critically constrained by foreign exchange shortages, and for this reason, exports and imports of such basic commodities as grain and energy follow patterns different from what one would expect given existing conditions of domestic scarcity. The recent sharp drop in the price of oil has reduced oil's usefulness for earning foreign exchange, but an export emphasis remains in the energy sector.

The tables and text which follow serve as an introduction to the most basic macroeconomic trends, both through 1985 and as they are likely to continue into the future. For much more detailed discussions of the historical trends and prospects for the future, see the chapters on individual sectors which follow.

Table 2-1
GROWTH OF CHINA'S GROSS DOMESTIC PRODUCT, 1981-2005
(Percent Annual Average Growth*)

	Agriculture	Industry	Other	Total	Per Capita
1981	9.2	2.6	4.5	6.5	5.1
1982	14.0	6.6	-2.0	8.6	7.1
1983	9.5	10.2	8.6	9.4	8.4
1984	12.8	12.3	41.3	18.5	17.3
1985	**-4.7****	**29.3****	**9.7**	**6.2****	**5.0**
1986	17.7	10.4	12.5	14.4	13.2
1987	6.5	13.8	16.8	10.9	9.7
1988	5.2	12.0	14.4	9.3	8.1
1989	4.4	10.4	12.4	8.1	7.0
1990	**3.6**	**8.3**	**10.9**	**7.0**	**5.8**
1995	3.7	9.3	8.0	6.7	5.5
2000	3.2	7.4	6.6	5.6	4.5
2005	2.8	6.3	5.1	4.8	3.7

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

* NOTE: Based on GDP in constant 1980 U.S. dollars, converted at sectoral purchasing power parity exchange rates estimated by Rock Creek Research.

** NOTE: 1985 GDP for Agriculture and Industry are based on levels reported in the 1986-90 plan. They have been deflated to 1980 prices with gross value output price deflators, and reflect the volatility of GDP data in periods of rapid reform and irregular weather. Growth for total GDP is based on international prices rather than Chinese prices, which exaggerate the contribution of industry.

SOURCES: 1980-85 data calculated from official information in the State Statistical Bureau (SSB) **1985 Statistical Yearbook, Tongji** for December 1984, and sectoral detail in officially published summaries of the Seventh Five-year Plan (1986-90).

Table 2-1, above, shows that China's Gross Domestic Product (GDP) accelerated strongly from 1980 to 1984, before slowing considerably in 1985, a result mainly of the poor performance in agriculture. Although industry's output growth for all of 1985 was remarkably strong, the annual data hide the severity of the industrial decline in the second half of the year (for details, see Chapter 3, below, on industry). Table 2-1 is also significant for the degree to which it reflects official information on sectoral GDP, which until very recently has been unavailable. The official Chinese measure of national output through 1985 has been Net Material Product (NMP), which suffers from important omissions; the appearance of GDP statistics makes comparisons with other economies more meaningful.

GDP measures value added and is very different from the gross output statistics so frequently cited in official sources. Gross output contains serious degrees of double-counting and is not a reliable measure of real growth. It is also useful to note that growth rates in Table 2-1 are based on output figures in U.S. dollars which have been converted at rates which reflect the low quality and over-pricing of much of China's industrial output. As a result, industrial growth is given much less importance in average growth for the whole economy. For this reason, growth rates shown differ from officially published data, and are a more accurate measure of China's economic performance. (For official data measured in Chinese yuan, see the Rock Creek Research **1986 China Statistical Handbook.**)

Table 2-2
CHINA'S GROSS DOMESTIC PRODUCT, 1980-2005
(Billion Constant 1980 U.S. Dollars)

	Agriculture	Industry	Other	GDP Total	GDP per Capita*
1980	131.0	60.0	57.7	248.7	252
1985	**192.0**	**104.9**	**99.3**	**396.2**	**379**
1990	273.5	176.5	186.0	636.0	575
1995	328.0	275.8	273.9	877.8	751
2000	383.1	395.1	376.2	1,154.4	936
2005	440.9	535.6	483.1	1,459.6	1,120

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
* NOTE: Units for GDP per capita are constant 1980 U.S. dollars per person.
SOURCES: 1980-85 data calculated from official information in the State Statistical Bureau (SSB) **1985 Statistical Yearbook, Tongji** for December 1984, and sectoral detail in officially published summaries of the Seventh Five-year Plan (1986-90).

The severity of the decline in 1985's agricultural output was the most unexpected element in China's 1985 economic record and resulted from a combination of poor weather and dramatic incentive reforms--reforms which had a strong and unanticipated effect on cropping patterns, especially for grain. Policy adjustments and a return to normal weather in 1986 would result in average growth over the two-year 1985-86 period of roughly 7 percent, which although lower than in the 1981-84 period would still be high by Third-World standards. Patterns and policies in agriculture, however, have political significance and deserve careful attention (for important details, see the analysis in Chapter 8).

Overall, then, trends in 1985 represented something of a disruption in the pattern of steady economic growth since 1981, and the nature and degree of the 1986 recovery will give a good indication of the effectiveness and flexibility of Chinese policy-makers' new macroeconomic controls. Cropping patterns and trends in the first four months of 1986 imply the recovery will be a strong one, and Tables 2-1 and 2-2, above, present a consistent picture of what China's growth will be like through the end of the century under these circumstances. These possibilities are discussed briefly in the **TRENDS** section, below.

Table 2-2, above, presents actual values of China's overall and per-capita GDP from 1980 to 2005. Two important factors to note are the very low level of 1985 per capita income, making China one of the poorest countries in the world, and the large size of China's overall economy in the early twenty-first century, equivalent to Japan's today. This projection of China's future economic size is based on a continuation of current trends, with gradual moderation, through the 1990s. Such a continuation is likely, given China's continued high investment rates and increased productivity resulting from ownership, management, and price reforms. Tables 2-3 and 2-4, below, show historical and projected output trends as measured in traditional Chinese gross output statistics.

Table 2-3
GROSS VALUE OUTPUT GROWTH (Percent Annual Average)

	Agriculture	Industry	Agriculture & Industry	Other Output	Total Gross Output
1981	5.9	4.5	4.9	2.6	4.5
1982	11.3	7.8	8.8	13.5	9.5
1983	7.7	11.2	10.2	10.9	10.3
1984	12.4	16.3	15.2	7.2	13.9
1985	**3.0**	**21.3**	**16.4**	**15.2**	**16.2**
1986	10.1	11.0	10.8	9.0	10.5
1987	6.8	15.0	13.0	14.0	13.2
1988	5.8	13.4	11.7	13.3	12.0
1989	5.3	12.5	10.9	12.1	11.1
1990	**4.8**	**11.5**	**10.2**	**10.9**	**10.3**
1995	4.2	11.0	9.9	7.7	9.5
2000	3.6	9.1	8.3	6.2	8.0
2005	3.3	7.8	7.3	3.7	6.9

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: Agriculture and industry, 1980-84 from State Statistical Bureau (SSB) **1985 Statistical Yearbook**, 1985 data are from the SSB communique on 1985 plan fulfillment; construction, transport, and commerce in "Other" for 1980-84 are from the same sources as for agriculture and industry; "non-productive" services in "Other" are Rock Creek Research estimates based on trends in physical output indicators reported in official statistics.

Referring to Tables 2-3 and 2-4, it is immediately obvious that these projections show much higher output than the official Chinese target of quadrupling gross output of agriculture and industry between 1980 and 2000. In fact, trends in Table 2-4 show that this traditional planning measure of output will have quadrupled well before 1995 and increased nearly 7-fold by 2000. This difference between official target slogans and projected growth is the result of the conservative nature of original targets, the very rapid growth since they were announced in the early 1980s, and the large element of double counting in the gross value output measure, which in general increases over time and inflates the degree of actual growth. It is much more difficult to quadruple GDP, and more difficult still to quadruple per capita GDP. In recent months Deng Xiaoping, China's most powerful leader, has speculated about quadrupling per capita GDP between 1980 and 2000. The Rock Creek Research projections in Table 2-2 show that the output levels envisioned in these tables fall somewhat short of quadrupling per capita GDP during that period. In all, these projections are a good baseline for considering what China's economy will be early in the twenty-first century.

Table 2-4
GROSS VALUE OUTPUT (Billion 1980 Yuan)

	Agriculture	Industry	Agriculture & Industry	Other Sectors	Total Gross Output
1980	198	522	720	134	854
1985	**290**	**923**	**1,213**	**214**	**1,427**
1990	399	1,677	2,076	375	2,450
1995	489	2,830	3,320	543	3,863
2000	584	4,371	4,955	733	5,688
2005	686	6,376	7,062	880	7,941

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
SOURCES: Agriculture and industry, 1980-84 from State Statistical Bureau (SSB) **1985 Statistical Yearbook**, 1985 data are from the SSB communique on 1985 plan fulfillment; construction, transport, and commerce in "Other" for 1980-84 are from the same sources as for agriculture and industry; "non-productive" services in "Other" are Rock Creek Research estimates based on trends in physical output indicators reported in official statistics.

One of the reasons China's per capita GDP is growing so fast is the slow growth of its population, the result of an aggressive family planning program. Table 2-5, below, shows China's two most significant demographic trends: the success in controlling overall population growth and the extraordinary pace at which the rural population is urbanizing. Beginning in the 1970s, China's crude population growth rate began to slow significantly, and by the early 1980s it was approaching 1 percent per year. Although there is evidence of some relaxation of the one-child policy for both urban and rural families, the projections show that China will come close to attaining its goal of limiting total population to 1.2 billion by the year 2000.

Much more dramatic than the gradual slowing of overall population growth is the explosion in China's urban populations, as rural peasants move to towns and as areas once considered rural acquire the official status and commercial significance of urban areas. In both cases, the rapid increase in city dwellers must be having a major influence on work and consumption patterns, ultimately further lowering the population growth rate itself, given that the natural rate of population increase in urban areas of China has been between one-third and one-fourth that in rural areas for much of the early 1980s.

Equally as significant as the shift to urban living itself is the relatively well-to-do status of the new urban dwellers by Third World standards. Although the evidence is largely anecdotal, it appears that many farmers with linkage to land under the responsibility system (China's de-facto land reform), or at least their family members, are moving to towns, bringing with them some economic basis for living and working there. In other words, because of their substantial economic foundation in rural areas, these new town dwellers can form the basis for an expanded middle class. This is very much the pattern in other East Asian economies which have undergone land reform (South Korea, Taiwan, and even Japan), but very different from the mass migration of impoverished landless peasants to the urban areas of India, Indonesia and other heavily populated poor countries with unreformed land tenure systems.

Table 2-5
CHINA'S POPULATION GROWTH AND URBANIZATION

	Population (Million)			Growth (Percent)			Share (Percent)	
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1980	796	191	987	.7	3.5	1.2	80.6	19.4
1981	799	202	1,001	.4	5.4	1.4	79.8	20.2
1982	804	212	1,015	.6	4.9	1.5	79.2	20.8
1983	784	241	1,025	-2.5	14.0	.9	76.5	23.5
1984	705	330	1,035	-10.1	36.8	1.0	68.1	31.9
1985	**643**	**404**	**1,046**	**-8.8**	**22.4**	**1.1**	**61.4**	**38.6**
1986	599	459	1,058	-6.8	13.7	1.1	56.6	43.4
1987	576	494	1,070	-3.8	7.5	1.1	53.8	46.2
1988	560	522	1,082	-2.8	5.7	1.1	51.8	48.2
1989	550	544	1,094	-1.8	4.2	1.1	50.3	49.7
1990	**546**	**560**	**1,106**	**-.8**	**3.0**	**1.1**	**49.3**	**50.7**
1995	522	647	1,168	-4.4	15.4	5.6	44.6	55.4
2000	526	708	1,234	.9	9.4	5.6	42.7	57.3
2005	542	761	1,303	3.0	7.5	5.6	41.6	58.4

NOTE: 1985 is the last year for which total population statistics are based on historical data. 1984 is the last year for historical rural and urban data. Other statistics through 2005 are from the Rock Creek Research China economic model.

SOURCES: 1984 statistics are from the State Statistical Bureau **1985 Statistical Yearbook**. 1985 total population figure is from the SSB March 1986 communique on 1985 plan fulfillment.

The rural-urban population shift is also one of many factors contributing to the increased efficiency of China's productive capacity, because under the numerous incentive and industrial management reforms there appears to be a shift from capital-intensive to more labor-intensive methods. In general, China's overall economic growth comes from a combination of increased capital stock and improved productivity for that capital stock. In principle, this increase in capital stock is a relatively straightforward result of investment in plant, equipment, and infrastructure, with allowances for replacement of capital stock no longer usable. The increase in productivity of that capital stock, however, is a complex combination of a number of factors, including new technology, improved labor skills, using labor to do jobs previously done by machines, better management of enterprises, an economic environment with more incentives, and even good weather.

Although the increase in productivity is difficult to measure directly, it can be estimated from historical data, given the national level of investment (equivalent to what the economy does not consume), estimates of historical productivity, and actual output changes. Naturally, the importance of investment is very great. Table 2-6, below, combines an analysis of China's high savings and capital accumulation rate with estimates of investment productivity to determine how much of China's economic growth is due to investment and how much to other factors, such as increased labor intensity, new technology, and more efficient management.

Table 2-6
SOURCES OF GROWTH

	Savings (Percent)		Capital Productivity		NMP* Growth (Percent)		
	Out of NMP*	Out of GDP*	(Output/ Capital Stock)	Percent Change	Total	due to Savings	due to Other
1981	28.5	23.4	.222	-2.2	4.9	7.2	-2.3
1982	29.0	24.0	.227	2.3	8.3	6.3	2.0
1983	29.7	24.6	.232	2.2	9.8	6.6	3.2
1984	31.2	25.0	.243	4.7	13.8	6.9	6.9
1985	**33.4**	**26.8**	**.253**	**4.3**	**12.2**	**7.6**	**4.6**
1986	32.0	25.6	.263	3.9	12.7	8.5	4.2
1987	31.5	25.0	.270	2.4	11.1	8.4	2.6
1988	31.3	24.7	.272	1.0	9.5	8.5	1.0
1989	30.8	24.1	.272	-.1	8.4	8.5	-.2
1990	**29.7**	**23.1**	**.268**	**-1.4**	**6.9**	**8.4**	**-1.5**
1995	29.3	22.1	.252	-1.2	6.8	8.1	-1.3
2000	29.9	21.9	.229	-1.9	5.5	7.6	-2.1
2005	30.3	21.5	.202	-2.4	4.5	7.1	-2.6

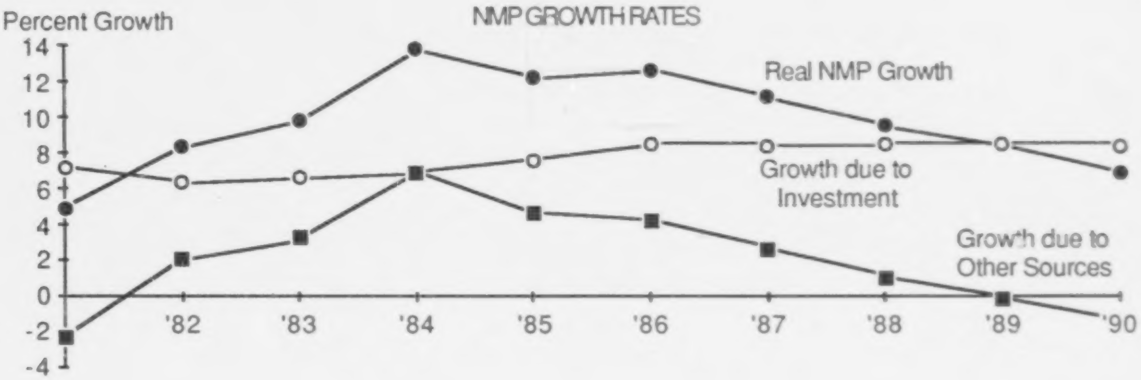
NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

* NOTE: NMP stands for Net Material Product, the Chinese/Marxist equivalent to Gross Domestic Product (GDP), the usual measure of value-added in the West.

SOURCES: NMP savings 1980-84 from State Statistical Bureau **1985 Statistical Yearbook**, 1985 from **Beijing Review** April 14, 1986; GDP savings are Rock Creek Research calculations based on estimated GDP/NMP ratios. Capital productivity and growth are from RCR research on productivity trends since 1949. Real NMP growth, 1981-85 is from the **1985 Statistical Yearbook**, and 1985 from the SSB March 1986 Communique on 1985 plan fulfillment. Growth due to savings (investment) and other sources are calculated based on other information in the table.

China's rate of saving and capital accumulation--the share of output not consumed but rather dedicated to plant and equipment for future output--is relatively high by world standards, especially poor-country standards. Because the official Chinese savings rate data are based on NMP (Net Material Product), which is smaller than GDP, the usual output measure in the West, Table 2-6 gives China's savings rate by both measurements. In each case, China's savings rate is close to or greater than 30 percent of output. As the quality of investment goods improves, this high rate of capital accumulation should continue to support rapid rates of output growth.

Diagram 2-2



As Table 2-6 also shows, however, not all of China's growth is explained by increases in capital stock. Other sources of growth mentioned above are also extremely important for understanding current trends in China's economic output. Historical data through 1985 show that non-investment sources of growth have at times accounted for as much as one half of China's total increase in output.

The historical relationship through 1985 between growth due to investment and growth due to other factors is useful for projecting growth into the future. Table 2-6 reflects rather conservative assumptions about both investment and productivity change from 1986 through 2005. If savings (investment) as a share of output declines gradually while growth in capital productivity also slows and then declines, the result is the output patterns described in all the tables in this chapter. In other words, without such conservative assumptions, if China is somehow able to sustain the current growth rates in capital productivity through the 1990s, total output growth will be even more rapid than projected and much more rapid than in official growth targets.

While the domestic economy's growth is the most fundamental of China's economic trends, the rapid growth in China's international economic transactions is equally as dramatic. Tables 2-7 and 2-8, below, review the recent record in China's trade, current account, and capital account balances.

China's international trade and borrowing from late 1984 through early 1986, with growing imports and large trade deficits, showed a rather dramatic shift away from the pattern of surpluses enforced in the early 1980s.

Although trade data in April 1986 indicate roughly balanced trade on an FOB basis due to a recovery in exports and slowed import growth, given the large deficit in the first quarter of 1986, it is difficult to say if the second half of 1986 will again see more balanced trade due to recovered export earnings. Whatever the case, the most important trade trend remains China's continued importation of machinery and equipment to enhance investment productivity. In this sense, foreign trade trends have been strongly influenced by the domestic economic reforms and China's resulting ability to successfully absorb increased amounts of foreign technology. Annual trends and their projection into the future are shown in Table 2-7 below. For greater detail, see Chapter 7, below.

As a result of the large 1985 trade and current account deficits shown in Table 2-7, China both drew down its foreign exchange reserves and began to borrow abroad in significant amounts. Overall, Table 2-8, below, shows that the 7.6 billion dollar current account deficit in 1985 was paid more by borrowing than by drawing down reserves.

Table 2-7
CHINA'S CURRENT ACCOUNT BALANCE, 1980-2005
(Billion Current Dollars)

	Exports FOB	Imports FOB	Trade Balance	Invisibles Net	Current Account Balance
1980	18.1	17.8	.3	.3	.6
1981	22.0	19.4	2.6	.4	3.0
1982	22.3	16.9	5.4	1.4	6.8
1983	22.2	18.7	3.5	2.3	5.8
1984	26.0	24.0	2.0	2.0	4.1
1985	**27.4**	**38.5**	**-11.1**	**3.5**	**-7.6**
1986	24.2	26.1	-2.0	2.8	.8
1987	26.4	30.4	-4.0	3.1	-.9
1988	28.9	38.2	-9.3	3.7	-5.6
1989	32.3	43.1	-10.8	4.1	-6.6
1990	**36.7**	**48.8**	**-12.2**	**4.7**	**-7.4**
1995	56.1	71.3	-15.3	7.0	-8.3
2000	90.2	103.1	-12.9	10.6	-2.3
2005	144.1	148.0	-3.9	16.1	12.2

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: 1980-81 trade and invisibles are calculated from official Ministry of Foreign Trade, China Customs Administration data, and the Bank of China, as reported in a variety of sources. 1982-84 trade and invisibles are from the Bank of China's September 1985 communique on China's capital and current accounts. 1985 data are from the official customs statistics reported in the State Statistical Bureau's monthly statistical bulletin.

It is not certain what China's trade and payments policy will be in 1986-87. To a certain degree the deficits from late 1984 through early 1986 were as much the result of faltered exports as booming imports. Faltered exports, in turn, were the result of enterprise management reforms which made it unattractive for domestic manufactures to export, given high domestic prices and China's overvalued exchange rate. Under these conditions, the Chinese leadership seems to have decided to seek a solution to the deficit problem by emphasizing export earnings rather than by making cutbacks in total imports. If this is the case, imports can be expected to continue to grow, but at a slower pace, while exports accelerate and reduce or eliminate the trade deficit. The projections in Tables 2-7 and 2-8 assume that this process will occur rather rapidly in 1986 but that the trade deficit will remain significant.

Table 2-8
CHINA'S CAPITAL ACCOUNT BALANCE, 1980-2005
(Billion Current U.S. Dollars)

	Lending (Net)	Increase in Reserves	Capital Account Balance	Errors & Omis-sions	Foreign Exchange Reserves	Net Foreign Debt
1980	-1.8	.1	-1.7	2.1	1.9	.9
1981	.7	2.5	3.2	-.6	4.4	1.6
1982	-.3	6.3	6.0	.9	10.7	1.3
1983	.2	3.6	3.9	1.9	14.3	1.5
1984	1.0	.0	1.1	3.0	14.4	2.5
1985	**-4.1**	**-3.4**	**-7.6**	**.0**	**11.0**	**6.6**
1986	4.1	-3.3	.8	.0	11.1	2.5
1987	1.0	-1.9	-.9	.0	9.2	1.5
1988	-7.3	1.7	-5.6	.0	10.9	8.7
1989	-7.3	.7	-6.6	.0	11.6	16.1
1990	**-8.3**	**.9**	**-7.4**	**.0**	**12.5**	**24.4**
1995	-14.0	5.8	-8.3	.0	18.3	38.5
2000	-10.4	8.2	-2.3	.0	26.4	48.9
2005	.7	11.5	12.2	.0	37.9	48.2

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: 1980-81 lending and reserve statistics are based on Bank of China data as reported in a variety of sources. 1982-84 lending, reserves and errors are from the Bank of China's September 1985 communique on China's capital a current accounts. 1985 data on reserves are from official sources as presented in the International Monetary Fund's **International Financial Statistics**. 1985 lending is calculated from the other data assuming no errors and omissions. The initial 1980 net foreign debt level is a Rock Creek Research estimate.

The considerable attention paid to China's balance of payments and debt in both official policy and outside commentary reflects the over-arching importance of foreign exchange shortages for China's economic development. Although the greatest significance of this shortage is probably its limitations on the importation of modern technology, its influence can also be seen in China's trade patterns in grain and energy. For both these important commodity categories, China consumes less and exports more than she would if foreign exchange were not in such short supply. The history of these trade and consumption patterns and their projections into the future are presented in Tables 2-9 and 2-10, below.

Table 2-9
CHINA'S GRAIN BALANCES
(Million Metric Tons)

	Production	Intermediate Use	Final Consumption	Total Consumption	Exports	Imports
1980	320.6	94.3	237.3	331.6	1.0	12.1
1981	325.0	110.2	227.3	337.5	.8	13.3
1982	354.5	137.2	232.6	369.8	.8	16.2
1983	387.3	157.0	242.7	399.7	1.2	13.5
1984	407.3	165.0	249.5	414.5	3.2	10.4
1985	**379.0**	**141.9**	**233.8**	**375.7**	**9.3**	**6.0**
1986	404.4	172.0	247.4	419.4	1.8	16.9
1987	408.2	177.8	245.0	422.7	2.2	16.7
1988	408.0	183.1	241.2	424.4	2.2	18.6
1989	406.6	187.2	237.3	424.5	2.3	20.2
1990	**404.4**	**190.7**	**233.4**	**424.1**	**2.4**	**22.0**
1995	416.6	227.2	213.2	440.4	2.1	25.9
2000	403.2	233.6	198.1	431.7	1.9	30.5
2005	390.3	236.6	187.4	424.0	1.8	35.5

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.

SOURCES: Grain output, 1980-85, from State Statistical Bureau **1985 Statistical Yearbook** and March 1986 communique on 1985 plan fulfillment. Exports and imports, 1982-85 from official customs statistics, 1980-81 converted from value data with estimated unit value ratios. Consumption breakdown between intermediate and final use from input-output calculations.

The grain balances presented above in Table 2-9 show not only the effects of limited foreign exchange; they also reflect China's critical shortage of arable land and the low financial return per hectare of land sown to grain compared to the return from other crops. Because of this revenue differential, farm management reform tends to encourage shifting land out of grain cultivation. As a result, with output limited by available land and imports of grain limited by shortages of foreign exchange, domestic consumption is caught in the squeeze.

Not only is domestic grain consumption overall caught in a squeeze, with the increased emphasis on animal husbandry and the development of feed grain processing, there are increasingly competing claims for domestic grain uses. One result of this dilemma is presented in Table 2-9's projections, which show both domestic production and final consumption of grain (as a staple food) severely constrained through the remainder of the century. The only alternatives to this scenario would have to come from much higher effective grain prices (to discourage planting shifts to non-grain crops) or the commitment of large amounts of foreign exchange to grain imports. At present, neither of these scenarios seems as likely as that presented in Table 2-9. The evolution of China's grain balances also has significant political repercussions (see Chapter 7, below, for additional comments on this topic.)

Table 2-10
CHINA'S ENERGY BALANCES
(Million Metric Tons of Standard Coal Equivalent)

	Production	Intermediate Use	Final Consumption	Total Consumption	Exports	Imports
1980	620.3	350.1	253.3	603.4	17.6	.7
1981	615.8	379.7	219.4	599.2	16.8	.2
1982	642.1	401.8	222.3	624.1	18.4	.4
1983	687.9	412.5	257.2	669.7	18.5	.3
1984	751.5	431.7	294.7	726.5	25.3	.4
1985	**811.6**	**439.3**	**338.2**	**777.5**	**34.9**	**.7**
1986	864.3	484.1	346.1	830.2	35.6	1.5
1987	929.2	516.4	378.0	894.5	36.5	1.8
1988	984.9	538.4	411.2	949.6	38.3	3.0
1989	1,043.0	564.7	444.1	1,008.9	39.8	5.6
1990	**1,106.1**	**599.6**	**477.7**	**1,077.2**	**41.4**	**12.5**
1995	1,445.7	768.0	662.8	1,430.7	46.8	31.9
2000	1,844.7	969.1	870.6	1,839.7	64.1	59.0
2005	2,245.0	1,167.4	1,095.9	2,263.3	70.7	89.0

NOTE: 1985 is the last year for which statistics are based on historical data. 1986-2005 results are from the Rock Creek Research China economic model.
SOURCES: 1980-84 production, total consumption and trade data from State Statistical Bureau **1985 Statistical Yearbook** and official **Customs Statistics**, various issues. 1985 production from SSB March 1986 communique on 1985 plan fulfillment; 1985 trade based on official customs statistics. The breakdown of domestic consumption between intermediate and final use is based on input-output calculations.

In addition to grain, China's energy consumption and trade patterns would be quite different were it not for the chronic foreign exchange shortage. Table 2-10, above, presents the relevant trends in China's energy balances. Although China has abundant energy reserves, they are isolated and expensive to extract. As a result, China has a domestic energy shortage. Nevertheless, given the attractive world market for oil through 1985, China has long been a net energy exporter. The need to earn foreign exchange has outweighed domestic demand considerations. It is also significant that petroleum exporting provinces and ministries, which want foreign exchange for their own projects, have in general been different from the regions and ministries in need of energy but unwilling to pay hard currency to domestic suppliers. Finally, China's foreign trade with Japan for many years hinged critically on an agreement through which Chinese imports of high quality Japanese steel were paid for with crude oil exports.

As oil prices weakened in 1984-85, China's crude oil export volume grew very rapidly in an unsuccessful attempt to maintain revenue levels. With the collapse of world oil prices in early 1986, China ceased increasing oil exports and abandoned the oil-for-steel arrangement. Data through April, however, show that coal exports have increased dramatically. China has apparently made the strategic decision that with the price of world oil so low, domestic energy needs should now have greater weight in the decision about oil export levels. Nevertheless, foreign exchange needs will continue to make net energy exports an important part of China's trade pattern until late in the century, by which time the domestic demand for refined petroleum products will have grown too large to ignore and will require imports at levels exceeding exports of crude and coal.

It is useful to note that the domestic energy shortage would be more severe than that shown in Table 2-10 were it not for the relatively rapid growth of energy output projected. The Chinese targets of doubling energy output between 1980 and 2000 are most certainly conservative. For a fuller discussion of this question, see Chapter 4 on energy. In addition to relatively rapid growth in energy output, domestic shortages will also be eased through significant conservation, given that China is arguably the least efficient consumer of energy in the world. In the early 1980s, overall output growth has far out-paced the growth in primary energy supplies. Furthermore, the projections in Table 2-10 are made without assuming major offshore oil finds. Should such finds occur, China's international energy position would change dramatically.

This concludes the relatively brief overview of China's macroeconomic trends through 1985 and their projection into the future. In most cases they are the result of China's broad shift in economic and social policy since the death of Mao Zedong (1976). These policies, with many adjustments and qualifications, are continuing into the latter 1980s. A summary of the overall policy direction is given below. For greater detail, see the various chapters which follow.

POLICY

Looking at China's overall economy, two basic policy trends stand out: reforms in domestic economic management, and conscious integration into the international economic community. Within these two broad national policy themes, numerous major dimensions have evolved, and in several cases the reform policies themselves have created complications requiring additional corrective policies.

Before looking at separate domestic and international economic policy trends, however, it is instructive to recognize a fundamental operational dimension of the reforms, which does best to borrow its name from China's foreign policy rhetoric: "one country, two systems." In this case, "one country, two systems" does not mean one China with a socialist mainland and capitalist Taiwan and Hong Kong, but rather refers to one mainland economy with a centrally managed core and a growing market periphery. In virtually every sector the process of reform has worked in the same way, with experimental steps taken in a few locations or enterprises, followed by a spread of the successful measures to small and medium-size units around the country, and with eventual final changes occurring in the major state-owned enterprises most directly under ministerial control.

Currently, nearly every sector of China's economy reveals the two-system approach, which has progressed a great deal where it is popular, such as in agriculture, but very little in more difficult areas, such as the urban labor market. The two-system evolution, then, is China's way of introducing radically new principles in economic management while causing the least disruption to more rigid institutions of the older centrally planned order.

Recognizing this division, any summary of China's broad reform policies should not only focus on the characteristics of the new systems being introduced, but should also recognize their interrelations with and influences on the older institutions and management regimes they supplement and challenge. With this dynamic element in mind, the brief outline below mentions only a few major characteristics of China's emerging new economic order, both domestic and international.

Out of the wide range of new domestic policies, two unifying principles have gradually emerged: private profit incentives at the level of day-to-day production, and competition among different units. Profit incentives have taken the place of physical output targets, and competitive choice has replaced direct allocation of inputs and guaranteed purchases of final production. Profit incentives and competition, in turn, include, make possible, or bring about many other more publicized aspects of the domestic reform movement, such as price, banking, investment and construction, technology modernization, wage, and housing reforms, and even the introduction of indirect monetary and fiscal policies for controlling inflation and the pace of economic expansion. Without elements of profit incentive or competition, few if any of these reforms would have substance or much record of success.

One of the most striking and fundamental examples of the influence of profit incentives and competitive choice is that of price reform. Without accountability for profits, price reform by central government command would result in increased losses and subsidies rather than a realignment of resources reflecting national patterns of demand and resource scarcity. Without competition or choice of markets, enterprises and farmers would be guaranteed or restricted to transactions with traditional bureaucratic counterparts and would have neither a reason to reduce prices nor the opportunity to raise them. Within the Chinese reform environment, however, both profit incentives and competitive choice have been essential in guiding and propelling price reform. In many cases, centrally directed price reform in the planned economy came only after competition and profit motives revealed appropriate price adjustments in the more competitive economy.

For a more detailed account of individual domestic reforms by economic sector, see the subsequent relevant chapters. For reference, a partial list of major management and institutional reforms in agriculture and industry follows.

Agriculture:

- The 1979 introduction of the household contract responsibility system gave control of land and herds to individuals under terms of "temporary" contracts; by 1983, over 90 percent of such assets had been transferred.
- The 1979-80 reform in rural prices raised significantly the procurement price of major agricultural commodities while leaving their urban retail prices largely unchanged and subsidizing the difference.
- In 1981-83 rural fairs for the sale of animals, output in excess of government obligations, tools, and handicrafts gradually emerged.
- In 1983 experiments were begun allowing peasants to sell vegetables and fruits freely in selected major urban areas, most notably Wuhan, resulting in dramatic increases in supply and quality.

- By 1984 "responsibility" contracts had been lengthened to 15 years or longer, with some made inheritable; the term "ownership system" rather than "responsibility system" became increasingly used informally.
- Also by 1984, most communes were disbanded, with rural political authority returned to counties and towns.
- In early 1985 rural commercial relations for some products were changed from the traditional system of mandatory procurement to one of individual voluntary contracts between farmers and state procurement departments.
- In spring of 1985 the introduction of major price reforms in urban retail vegetable, meat, and seafood markets, with income subsidies to compensate for cost-of-living rises, brought increased competition, improved food quality, and contributed to high inflation in politically sensitive urban economies, especially Peking's.
- In June 1985 a national grasslands law transferred virtual ownership rights over China's expansive grasslands to individual herdsmen in an attempt to apply private incentives to the restoration of overgrazed land and rationalization of herd management.
- By the winter of 1985-86, land in state farms, the last major agricultural units under central management, had been transferred either to individual household control or to collectively managed larger farms, essentially completing the decentralization of land ownership.
- In January 1986 grain prices were adjusted upward and quantities of grain contracted for sale to the state were reduced in some areas, allowing more grain to be bought at higher negotiated non-contract prices.

Industry

- As early as 1979 the traditional Soviet emphasis on heavy, capital-intensive industry was formally replaced with a policy of industrial balance giving greater importance to light industry, which is in general more labor-intensive.
- In 1983, pilot enterprises began experimenting with operation on a for-profit basis, replacing direct transfer of all profits to the state with payment of an enterprise income tax.
- In 1983 textile price reforms for cotton and synthetic cloth demonstrated the effectiveness of prices for governing demand and resulted in the end of cotton cloth rationing.
- In 1983-84 the introduction of profit incentives in the coal industry as well as latitude to form joint ventures and sell new coal output at higher prices resulted in rapid increases in coal output, especially from small local mines.
- In early 1984 the "Contract Economic Responsibility System" was adopted everywhere for state-owned service enterprises, making them responsible for their own profits and losses.
- In May 1984, the State Council promulgated regulations further expanding the decision-making power of state-run enterprises.
- In September 1984, more than half of all industrial products were taken out of the plan, leaving decisions about output levels to enterprise managers.
- In October 1984, China's "Urban Reform Program" was presented, announcing far-reaching policies for severing relationships between enterprises and their ministries or local government supervisors. The program in principle stipulated a wide range of managerial freedoms and price reform measures, including the right to hire and fire labor, make investment

decisions, and set prices. It did not anticipate detailed specific measures these reforms would require.
- In May 1985, difficulties in transferring managerial authority to enterprises were reviewed, especially the interference of provincial and county officials; the independence of individual enterprise management was reaffirmed.
- In spring of 1985, experiments were begun with bankruptcy laws and procedures in selected Northeast provinces.
- In July 1985, new labor, wage, and bonus laws tied pay more closely to performance on the job.
- In September 1985, new state regulations allowed state enterprises and cooperatives to form "horizontal" joint ventures which cut across different trades, regions, cities, and different forms of enterprise ownership.
- January 1986 brought new shifts in prices of steel and cement, reflecting spontaneous free-market price changes during the inflationary months of 1985.
- By March 1986, negotiable stocks and bonds issued by state and cooperative enterprises emerged as new instruments for raising capital in competition with state-owned and regulated banks.
- Early 1986 saw the establishment of experimental financial hubs in selected major cities, with foreign exchange centers and interbranch borrowing by different state banks at negotiated interest rates.
- Official policy shifted with respect to regional development, promoting a "ripple" policy for three zones by which coastal provinces would develop fastest, transferring their technology and investment in waves to second line provinces and finally to the third set of provinces in the western interior; this undid longstanding Maoist priority on developing the interior.

These examples of agricultural and industrial reforms reflect the depth and complexity of the overall domestic reform movement, in particular the role of increased profit incentives and competitive choice. In many ways domestic reforms also provide the basic motivation for China's post-Mao expansion in international economic relations, which is seen as necessary to provide China with modern technology for all domestic economic sectors. The dynamism and rapid implementation of so many facets of this new policy of international integration, however, mark it as equal to the program of domestic reforms in its significance for China's economic growth and technical evolution.

China's new international economic posture represents a fundamental policy break not only with the Maoist past but also with a Chinese tradition of isolation and national self-sufficiency. Details of the most recent policy shifts, which have led to large deficits and significantly increased borrowing, are treated in some detail in Chapter 7. The few paragraphs which follow outline the long-term fundamentals of China's international economic strategy.

The economic dimensions of China's post-Mao international policies have two major goals: to acquire foreign technology, and to obtain critically necessary materials and equipments without which investment and production programs would be slowed unacceptably. Technology and critical inputs, then, are the core of China's foreign trade and payments strategy. Good examples of the technology transfer element are imports of plant, capacity, and know-how and overseas training of scientists and technicians. Examples of critical imports are high quality steel and industrial chemicals for synthetic materials.

The major difficulties related to acquiring technology and critical materials are China's shortage of foreign exchange and its poor ability to absorb new technology, given the low level and limited distribution of China's existing technology base. As a result, China's policies to reform the domestic economy have direct bearing on its ability to use foreign technology. The more Chinese enterprises make investment and production choices in a competitive environment based on profit considerations, the better use they will make of foreign technology. The rush to import technology in the late 1970s was halted when it was realized that the pre-reform system could not make good use of it. In 1984-85, with urban industrial reform well underway, new priority was given to technology imports.

With China's ability to absorb technology imports greatly improved, the remaining difficulty, limited foreign exchange, has received increased policy attention. Whereas early in the 1980s China's policy-makers were content to cut back imports to balance their foreign exchange budget, in the latter 1980s Chinese policy-makers seem reluctant to limit technology imports, preferring instead to maintain them by borrowing while policy attention is focused on promoting export earnings. China's most visible foreign economic policies, then, limiting unnecessary imports and promoting exports, are derivative policies with roots in the more fundamental goal of affording foreign technology and materials most critical for current development needs. Future policy can be expected to follow the current trend: screen imports and otherwise limit foreign exchange outflows while pushing exports on trading partners, both in general and as a condition for imports.

In both domestic and foreign dimensions, then, China's economic policies promote growth and increased economic efficiency by applying rather classic rules: promote competition in a profit-seeking environment and maximize technology improvements while using international trade to ease temporary bottlenecks in critical sectors. Although the overall program has some problems, they are not major ones threatening the reform process, and in general the outlook for the future is excellent. Evaluations of existing problems are presented briefly below.

PROBLEMS

Although there are difficulties and complications related to China's economic reforms and current economic growth, none of them is serious enough to stop or seriously impede the overall process, unless some major unforeseen event such as a Taiwanese declaration of independence severely disrupts the reform consensus. Even in that case, it is unlikely that forces opposed to the current trends would have enough power to overcome the influence of the new program's many beneficiaries. In particular, even the death of Deng Xiaoping is now unlikely to weaken significantly a strong reform constituency.

The nature of the problems facing China's overall macroecononomic development can be placed in four categories: economic problems, such as the foreign exchange shortage; political problems, such as the opposition of mid-level bureaucrats; transitional problems, such as urban inflation; and, finally, the threat of major shocks, such as a move for Taiwanese independence or Deng's death. The seriousness of problems in each category is reviewed briefly below.

China's four most-often mentioned economic difficulties are energy, transport, technology, and foreign exchange.

Although China has rich energy reserves, they are poorly distributed geographically and in general inaccessible to major industrial centers. Electric power grids are underdeveloped, and in many coastal areas electricity is rationed, leaving productive capacity idle for as much as several days each week. When energy output fell in 1980-81, many analysts saw it as a sign of chronic output decline, but the output dip resulted from financial contractions, not technical or resource limitations, and a similar but less severe production dip in the winter of 1985-86 also had financial origins.

Although energy shortages remain a serious problem, during the reform period energy production has responded to incentive reforms, as have energy conservation measures. Economic growth rates have in the past been much in excess of primary energy growth, and there is no indication that energy will severely restrict rapid growth in the future.

Within the transportation sector, reforms and incentives have eased bottlenecks as well, with water and highway traffic growing rapidly to supplement slower and more expensive rail expansion. In general, however, transport of both freight and passengers is difficult and very few of China's regional sub-economies are linked, while within the sub-regions roads are poor and communities isolated. China's poor transportation network, in turn, limits the scope of commercial expansion under the reforms. Congestion of ports is a particularly serious problem.

China's low level of technical sophistication is often viewed as a major barrier to any rapid Chinese ascendancy in the international economic arena, and China's overall technology levels in virtually every sector, with the exception of showcase enterprises, are certainly very low. This low level of sophistication, in turn, makes the acquisition of new technology itself difficult, because there are so few supporting services and institutions. By itself, however, a low technical level enhances the prospects for rapid growth and modernization because of the many opportunities for improvement. This is all the more so given China's relatively literate and trainable work force. China's technical level will remain low by world standards for some time, but even small transfers of foreign methods have already had and will continue to have dramatic influence on product quality and capital productivity.

The foreign exchange shortage is in many ways more significant than either energy, transport, or technology problems because greater availability of foreign funds could ease the constraints in so many other dimensions. China's ability to earn foreign exchange, however, is limited, as falling world oil prices cut into revenues and as increased global protectionist sentiment restricts new markets for textiles and other low-technology manufactures. Foreign exchange earnings can be supplemented to a limited degree by foreign borrowing, but even so, the inability to acquire needed technology and scarce inputs will unquestionably slow China's overall economic progress.

It should be stressed, however, that although all of these economic problems are slowing growth somewhat, neither individually nor as a group are they severe enough to stop growth or threaten the reforms. Similarly, important political problems associated with the reforms, in particular corruption and mid-level bureaucratic dissatisfaction, present significant challenges to the current modernization program but are unlikely to stop or undo it.

If any powerful group in China is both in a position to resist reform progress and has an incentive to do so, it is the large body of state bureaucrats--ministerial employees who for decades have managed the central economic planning apparatus. Because they are in a position to facilitate many of the intermediate reform steps (for example, by encouraging enterprises under their review to form horizontal links with other enterprises), these bureaucrats are also in a position to slow the reforms by withholding or drawing out required formal procedures. In many ways they are acting in their own self interest, because if the various horizontal commercial links between enterprises replace vertical allocation and procurement under the plan, these bureaucrats, millions of them, will be literally out of jobs.

The power of these groups comes in part from the traditional and often personal relationships of control they have with specific enterprises and the uncertainty on the part of those enterprises about how far the reforms will be championed by higher authorities. In this sense, then, one interpretation of the situation describes it as a conflict between the mid-level bureaucrats on the one hand and the enterprise managers and top national leadership on the other. It is in one sense the middle against the top and the bottom. With the national reform leadership in such commanding authority, in spite of ever-persistent rumors about a conservative back-lash, the competition for managerial control is apparently slowly being won by the top and the bottom. An additional factor in favor of this trend is the shift of mid-level bureaucrats themselves into new and more stable positions in the expanding decentralized economy. Evidence of the extent of this shift, however, is limited, and the resistance to reforms by the middle remains a major consideration.

Unlike the resistance of mid-level bureaucrats, the problem of official corruption is difficult to conceptualize. In one sense, black markets and pay-offs are the first signs of market relationships which eventually become established and beneficial. In another sense, however, the official bribes, protection schemes, extortion, police banditry and other forms of institutionalized theft found in so many poor countries could have a crippling effect on China's growth if they are allowed to develop and entrench themselves. There is little sign that what is currently reported as corruption in China has reached anything near these proportions. Accounts, however, of crackdowns on local highway tolls and arbitrary official charges on enterprises for permission to do business or transport products, merely as revenue-raising mechanisms, harks back to conditions in China before 1949 when the lack of a viable central authority meant that local warlords and toughs made honest commerce difficult if not impossible.

There is, then, this ultimate threat of corruption in China, but a strong central authority does exist, and "corruption" in the form of favors for children of high officials or diversions of major import shipments to alternative destinations for hard-currency bribes, will not stop the current reform progress. Furthermore, neither the party membership nor the population at large is likely to believe charges that these phenomena are alien to China and the result of contact with the West.

A third major set of problems in China, transitional instabilities, are the result of the reforms themselves, as their implementation goes in fits and starts, with bursts of growth, contraction of investments, import surges, inflation, subsidy cut-offs, and visible income discrepancies. Although transitional, these instabilities could nevertheless disrupt the popularity of the reform movement and weaken its legitimacy even in the eyes of current reform coalition members.

Among the various forms of transitional instability, two stand out: inflation and unemployment. Each threatens citizens' livelihoods, especially urban livelihoods. Inflation erodes real income, and unemployment cuts off income and benefits. Cities are the major potential source of instability in the current reform phase. Urban populations are easily mobilized and highly visible, and isolated outbursts in Peking and other cities have shown that China is capable of riots as spontaneous and potentially severe as those in other poor countries where government reforms have led to price rises for staple foods or budget cuts which also cut jobs.

However, just as the reforms bring on these transitional instabilities, they also seem to cushion their impact and provide long-term corrections. Reforms have given rise to new macroeconomic policies for controlling inflation, such as interest rate adjustments, credit controls, and taxation. Reforms have strengthened the supply response to shortages causing inflation; vegetables and coal are two visible examples of products in which the reform movement brought higher prices initially, which in turn prompted an increase in supply and downward price adjustments. For unemployment the pattern is similar and is most visible in the rural economy. As rural reforms have abolished communes and distributed land, some of the workers not needed for farming have found jobs with simultaneously emerging rural industries and service trades. Urban commercial and other service jobs are also growing in number, but since many of them are outside the state economic structure, information on their significance is limited.

The major point is that although the reforms are causing instabilities, they are also helping to ease them, and as long as China's leadership encourages adjustments in this way, the instabilities are unlikely to threaten the reform process itself. The question of leadership, then, raises the fourth category of problems facing China, the potential for major domestic and international shocks which could disturb the new development strategy. Two examples would be the death of Deng Xiaoping and a Taiwan declaration of independence from the mainland.

It is difficult to gauge how important Deng Xiaoping is to the continued success of the reforms. His personal influence and prestige seem to reach all levels of the current administration. In the competition between mid-level bureaucrats and local enterprise management, continued strong support from the very highest levels of the central government is critical. But as time passes, the period when Deng's personal presence is necessary may be coming to a close, if it is indeed not already over. The current reforms are not the creation of Deng Xiaoping alone and are as much a result of the nationwide fatigue and disillusionment associated with the Maoist period as they are the result of political engineering by any clever leadership clique. As a result, the death of Deng Xiaoping at this late stage in the reforms is unlikely to stop, much less reverse, the reforms.

Unlike the death of Deng, any movement among indigenous Taiwanese to form an independent country following the death of Jiang Jingguo could have major repercussions on China's domestic and international political equilibrium, with significance for the economy and its reforms. In particular, the response of Japan, the United States, Europe and other major world power centers would either reinforce or weaken the consensus currently building in China that domestic reforms and growing international integration are in China's best interests.

PROSPECTS

On balance, considering the rapid growth in recent years, adjustments made to curb inflation in 1985, recovered strong economic growth in 1986, the continuation of existing reforms and new experiments with incentives and competition, China's economic prospects are excellent.

The economic projections in Tables 2-1 through 2-10 provide a realistic picture of the scale and pace of China's economic expansion through the end of the century. In comparison with these Rock Creek Research projections, the official Chinese targets and their more detailed World Bank counterparts provide a low estimation of what current growth trends and reform policies imply. This is in part because the official targets are also political slogans providing "safe" growth goals in round integer form ("quadrupling" gross output, "doubling" gross energy output).

Low official and World Bank estimates result also from the limited information available when they were made. The "quadrupling" targets were announced in the early 1980s when the success of rural reforms was still in doubt and before the rapid industrial growth under urban reforms in 1984-85. The same is true of World Bank projections, which are based on 1983 data and which, in any event, were constrained to match official Chinese growth slogans. Events have since out-paced these earlier low estimates, and if China were to reach only those earlier goals, output growth would have to slow dramatically in the coming few years. This is not likely.

If China does grow in something like the pattern outlined, it will have a GDP in 2000 roughly the size of Japan's today. On a per-capita basis, of course, China's level will be roughly one-tenth that of Japan's now, and because of China's size, international trade will not be as important a factor in its overall economy. Nevertheless, China's economy will be large enough to affect the economies of virtually all other countries and territories in the region, if not the rest of the world.

Given the relatively slow growth in much of the world's economy, a sustained economic expansion by China, fueled in part by an emerging peasant middle class of tiller-owners, could support economic activity in many neighboring economies. China's economic development will not be perfectly balanced; there will be unmatched demand in some sectors, extra production in others. Natural opportunities for trade and investment will grow as China's economy grows. Where ten years ago there was virtually nothing in terms of international trade and economic opportunity, in fifteen years there will be a major world economy. Many observers of current Chinese trends resist thinking in these terms, but the economic trends to date and their qualified projection into the future show that events may be moving faster than even projections in this chapter indicate.

CHAPTER THREE -- Industry

EXECUTIVE SUMMARY

TRENDS

- A major slowdown in industrial growth in late 1985 has been followed by a recovery at the end of first quarter 1986.
- Shifts in enterprise management, from state to collective and individual, are a sign of continued reform and the major impetus for recent rapid growth.
- The predominance of coastal industry continues.

POLICY

- State policy attempts to control inflation led to the 1985 slowdown.
- Reforms in enterprise management continue as market forces play a larger role in economic decision-making by managers.
- Price reform continues, although more gradually in 1986 than in 1985.
- Coastal industrial bases have been given priority in China's overall development program.

PROBLEMS

- Enterprise management is still constrained by administrative controls which inhibit decisions aimed at improving plant efficiency and profitability.
- Mid-level bureaucrats have been reluctant to support the reform program, because it decreases their political power.

PROSPECTS

- Double-digit growth is likely to continue in 1986.
- It is possible that China will embark on a large-scale program of divestiture of state and collective enterprises to individual lease-holdings.

TRENDS

China's 1985-86 industrial output trends, structural shifts, and regional patterns show the overall rapid change affecting the sector. In particular, although annual data report startlingly high real growth, monthly data show that there was a major slowdown and even industrial decline in late 1985, as state policies attempted to dampen inflation. On the other hand, official monthly growth calculations, by the nature of their measurement, are slow to report major shifts in industrial output trends, and in particular by spring of 1986 had not yet shown the strong industrial output recovery revealed by more accurate seasonally adjusted data.

The sustained strong industrial output record is accompanied by continuing shifts in ownership of industrial enterprises, from state to cooperative and individual control. At the same time, regional output patterns show that growth is increasingly favoring the coastal provinces, where there is already a preponderance of China's industrial activity. In sum, the urban industrial management reforms appear to be ongoing and successful in sustaining high growth, in spite of government efforts to use macroeconomic controls to discourage the accompanying inflation.

China's industrial sector has undergone well-documented rapid growth in the early 1980s. Gross output of industry, corrected for inflation, grew over 16 percent in 1984 and over 21 percent in 1985, if output of rural village industry is included in the total. As discussed below, these annual statistics hide the fact that industrial output, seasonally corrected, actually declined throughout much of the second half of 1985, but growth in the first half was so high, and the recovery in early 1986 so strong, that the annual record is still an accurate picture of China's overall industrial trends during the period.

Table 3-1
INDUSTRIAL GROSS OUTPUT, 1975-85
(constant 1980 prices)

Year	Heavy Industry	Light Industry	Rural Industry	Total With Rural	Total Without Rural
(Percent Growth)					
1975	16.83	-12.98	32.80	15.53	15.13
1976	.55	2.37	44.79	2.46	1.34
1977	14.27	14.31	23.24	14.61	14.29
1978	15.59	10.80	15.40	13.57	13.49
1979	7.67	9.64	16.40	8.82	8.51
1980	**1.46**	**18.38**	**21.31**	**9.29**	**8.76**
1981	-4.72	14.12	12.20	4.51	4.13
1982	9.82	5.71	9.68	7.81	7.71
1983	12.38	8.70	23.47	11.20	10.53
1984	14.20	13.90	53.41	16.31	14.05
1985	**17.90**	**18.10**	**61.58**	**21.40**	**18.00**
			(Billion 1980 Yuan)		
1985	418.1	411.5	93.1	923.4	829.5

SOURCES: Official Chinese statistics and RCR calculations. (J5cbc04.d5j)

The annual growth rates for Chinese industry, given in Table 3-1, above, show that double-digit growth is not unusual. In particular, since 1975, overall industrial growth has hovered around 10 percent. Except for only two periods of particular crisis, Mao's death in 1976 and the 1981 state fiscal crisis from the fighting with Vietnam, high growth has been the norm for China. The double-digit industrial growth of 1984-85 seems to match growth in the 1977-78 period, which, however, without management and market reforms, could not be sustained.

Indeed, the most important reason for such high industrial growth in recent years is the on-going series of reforms in industrial management and market relationships, including a pronounced shift in growth and ownership from state to collective enterprises. There are numerous other causes for the impressive record, including rapid increases in investment, money supply, agricultural output, and a relaxation, for the time being, of energy constraints which seemed so critical in 1980-81. But in the final analysis, reforms introducing profit incentives and an increasing degree of competitive choice have been the principal factor.

Because trends in China's industrial output are shifting faster than annual data can accurately report, Tables 3-2 and 3-3, below, give quarterly and monthly output statistics and show both the industrial slump in late 1985 and the recovery in 1986. Notice in particular how the official growth calculations, in the quarterly data and in the second column of monthly data, report the trends with a delay of roughly three months.

Table 3-2, below, shows the pattern of quarterly industrial output as measured by official calculations. The surge in output in late 1984 and early 1985, as well as the slowdown in winter of 1985-86, is clear. The recovery in early 1986 will not appear in official data until later in the year. One of the most interesting aspects of the recent industrial boom, slowdown, and recovery is the way both heavy and light industry have grown in similar patterns. Earlier in the decade, first heavy industry and then a year later light industry experienced strong growth slumps, and if anything, output for the two major categories see-sawed. In recent years, Chinese policy-makers have apparently achieved one of their goals: balanced growth for heavy and light industry.

Table 3-2
GROWTH OF QUARTERLY GROSS OUTPUT 1982-1985

Year/Qtr		Total Industry	Heavy Industry	Light Industry
	(Percent Growth)			
1982	**I**	**11.6**	**8.5**	**14.6**
	II	8.8	10.5	7.3
	III	5.7	10.3	1.2
	IV	3.1	5.0	1.4
1983	**I**	**6.9**	**12.0**	**2.3**
	II	10.3	12.7	7.9
	III	12.7	13.6	11.8
	IV	12.2	14.8	9.8
1984	**I**	**11.9**	**11.7**	**12.2**
	II	11.4	11.8	10.9
	III	14.4	15.6	13.1
	IV	17.5	17.2	17.7
1985	**I**	**23.0**	**20.6**	**25.4**
	II	23.4	21.5	25.4
	III	17.3	14.5	20.3
	IV	10.2	10.7	9.7
1986	**I**	**4.4**	**5.2**	**3.6**
(Billion 1980 Yuan)				
1986	I	198.72	98.50	100.22

SOURCES: China's State Statistical Bureau official data.

Just as important as trends revealed by official quarterly and monthly growth calculations is the realization that official data report trends after they have already occurred. Trends shown by the official monthly data "lag" the major shifts. This delay results from the nature of the official measure, which compares output in one month with output in the same month one year earlier. In other words, the growth rate reported for one month includes the increases in output for all of the previous 12 months. Even if growth is strong for several months, the official growth rate would continue to show low growth and even negative growth, if during the previous 6 months output had sharply declined. This is particularly true if one year earlier the economy was also changing rapidly, as it was in early 1985. To put it yet another way, it takes many months of strong decline or strong acceleration before the actual force of the change is reflected in official statistics.

Table 3-3
MONTHLY GROWTH OF TOTAL INDUSTRY
(Official and Seasonally Adjusted)

Year	Mon	Total Gross Output (Bil Yuan*)	Official Growth Rate* (%)	Seasonally Adjusted Growth Rate* (%)
1984	Jan	51.9	8.5	17.1
	Feb	46.1	16.0	3.4
	Mar	56.9	12.0	24.8
	Apr	57.1	11.1	16.4
	May	59.0	12.0	21.7
	Jun	**60.5**	**11.0**	**11.4**
	Jul	56.5	14.2	23.9
	Aug	57.6	14.6	25.1
	Sep	61.4	14.4	25.8
	Oct	61.4	15.1	17.4
	Nov	64.7	16.8	20.5
	Dec	**65.5**	**20.5**	**10.5**
1985	Jan	64.6	24.5	63.6
	Feb	56.2	22.0	35.8
	Mar	69.6	22.3	16.6
	Apr	71.2	24.8	19.3
	May	72.3	22.6	11.0
	Jun	**74.3**	**22.9**	**9.4**
	Jul	67.9	20.2	6.5
	Aug	67.6	17.4	.4
	Sep	70.3	14.5	-6.6
	Oct	68.6	11.7	-12.4
	Nov	70.3	8.8	-28.4
	Dec	**72.2**	**10.2**	**9.7**
1986	Jan	68.2	5.6	36.5
	Feb	56.8	.9	-2.8
	Mar	73.8	6.0	19.1
	Apr	74.0	3.9	16.5
	May	76.0	5.0	20.0

* NOTE: Output in constant 1980 yuan; growth rates on an annual basis.

SOURCES: Monthly data from **China Economic News**, various issues, and State Statistical Bureau, **Monthly Statistical Bulletin**, Peking, various issues. Seasonally adjusted growth rates are Rock Creek Research calculations. (di001s.b6f)

To avoid the delay in reporting growth shifts, seasonally adjusted data are used in Table 3-3, above. For this, a month's output is compared to that for more recent months, after correcting for its unique seasonal characteristics, based on their average over many years. The most striking trend in the seasonally adjusted data is the recovery in output growth in December-May, excluding the irregularity in February. On average, output in the first five months of 1986 grew nearly 18 percent on an annual basis. These monthly growth rates are the strongest since the 1984-85 boom period, and if they continue would mean overall 1986 industrial growth of more than 10 percent.

The same data show negative industrial growth in late 1985 (September-November), the major reason for low official growth rates in early 1986. Looking even earlier, in mid-1984 the seasonally corrected series also shows the sustained growth pattern which eventually appeared in official data in early 1985. These are the clearest illustrations of the lag in official reporting and indicate that the recovery revealed by adjusted data for the first quarter will also become officially evident in the third quarter of 1986, at the latest.

Table 3-4
GROWTH IN MONTHLY ENERGY OUTPUT 1985-1986

Month		Coal	Crude Oil	Natural Gas	All Electricity	Hydro-Power
Growth Rates (Percent)						
1985	Jan	16.6	9.4	5.8	10.4	7.3
	Feb	10.3	9.0	6.1	4.6	-2.8
	Mar	6.0	12.3	6.0	7.6	2.5
	Apr	11.6	12.5	13.9	9.9	14.1
	May	11.0	9.9	6.0	8.5	2.7
	Jun	18.7	11.1	7.8	9.2	6.8
	Jul	11.9	10.6	5.7	8.3	-5.8
	Aug	9.2	7.6	5.5	7.1	5.3
	Sep	10.0	6.8	6.4	8.0	7.4
	Oct	9.0	6.6	-2.3	8.4	3.5
	Nov	5.6	6.2	7.7	8.9	14.2
	Dec	9.3	5.9	-9.8	10.4	9.6
1986	Jan	-3.3	3.9	.5	6.0	-3.7
	Feb	-3.7	1.4	8.9	6.4	-7.8
	Mar	7.1	.6	7.8	9.3	-1.2
	Apr	-1.6	-2.0	-5.0	-2.4	20.7
	May	6.0	4.6	6.6	5.4	26.3
Output *						
	May	75.83	10.84	1.20	37.57	8.6

* Reported as follows: Coal and Oil in million tons, Natural Gas in billion cubic meters, Electricity in billion kWh.

SOURCES: State Statistical Bureau **Monthly Bulletin of Statistics**, China (in Chinese), electricity from **China Economic News**, various issues. March 1986 through May 1986 data from **China Economic News**, various issues. (j6bci01t.d6f dmthengy.d6e)

The slowdown in energy output, especially coal, as measured by official monthly growth rates, appears particularly strong and reflects both low if not negative growth late in 1985 and rapid output growth in early 1985, one year earlier. Negative official growth rates for coal, shown in Table 3-4, above, mean that output in the first quarter was actually less than it had been at the peak of the 1984-85 industrial boom. Because of a shortage of historical monthly data for energy, seasonal corrections have not been made. It is important to note, however, that just as in the energy output slowdown in 1980-81, the causes lie not in some technical or underlying structural failing of the energy industry. Rather, the poor performance is the result of financial policies implemented by the central government to limit inflation by cutting subsidies and investment. Recovery in output growth should accompany either renewal of state disbursements or reform of coal prices allowing significant industry profits.

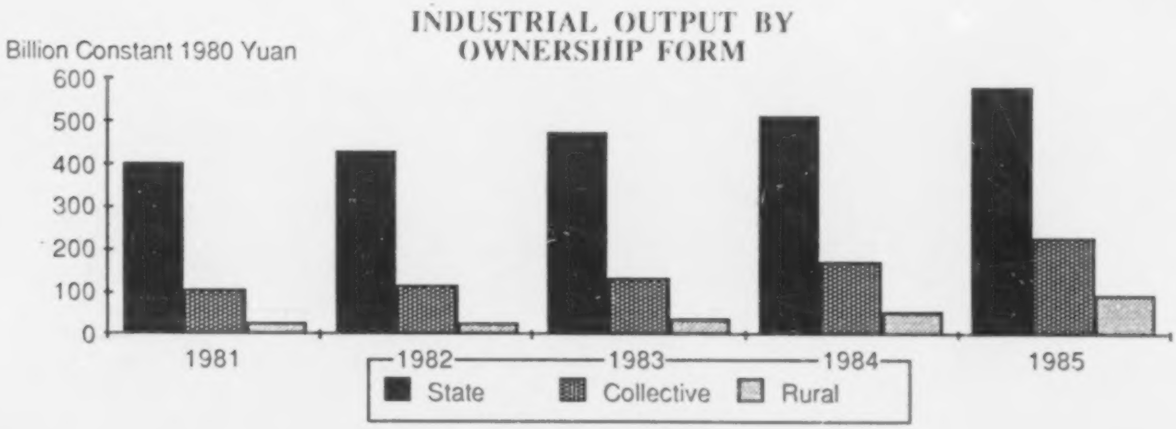
Table 3-5
INDUSTRIAL OUTPUT BY FORM OF OWNERSHIP, 1980-85

	State Owned	Collectively Owned	Village Industry*	Other Forms	Total With Village Industry*
(Percent Growth)					
1980	5.6	18.8	25.1	-	11.0
1981	2.5	9.4	12.2	11.5	4.6
1982	7.1	9.5	9.7	27.7	7.8
1983	9.4	13.5	23.3	33.9	11.2
1984	8.9	29.8	53.4	56.8	16.3
1985	**12.9**	**30.9**	**61.6**	**39.5**	**21.4**
(Bil 1980 Yuan)					
1985	584	230	94	12	923

* NOTE: Village Industry is currently being redefined as part of Industry proper.
SOURCES: Official statistics and RCR calculations. See Statistical Appendix.

A different production shift, from state- to collectively-owned enterprises, is documented in Table 3-5. The shift comes as a result of the formal transfer of approximately three thousand enterprises from state to collective ownership in 1984 and the implementation of urban management reforms. Table 3-5 shows that cooperative industrial enterprises have experienced more than twice the growth of state-owned plants and account for more than a quarter of all gross industrial output. The rapid growth of cooperative industry, which continued to out-pace state industrial growth during the late-1985 decline, attests to the on-going reforms to decentralize management.

Diagram 3-1



The rapid growth of the third industrial ownership category, village industry, requires qualification, however. Newly released data show that of reported gross output value of village industry, only roughly 5 percent is value added. That is, much of village industrial output appears to be the performance of relatively minor operations to industrial products in production. But because of the Soviet output measure used, total value of the product is counted as output. As a result, the degree of double counting and hence spurious output growth reported is very high for village industry. The five percent value-added share out of gross output for village industry must be compared with roughly 33 percent for industry in general.

In spite of these qualifications for village industry, which is growing so rapidly, the overall pattern of industrial output through 1985 and into 1986 reveals ongoing reform and adjustment in China's industrial ownership pattern. In particular, collectively-owned industry seems to be at the forefront of enterprise management experiments with enterprise leasing, bankruptcy laws, and worker-owned company equity shares.

A final category of significance for China's industrial growth is shown by investigations of provincial and regional industrial growth patterns. In general, provincial industrial data for the second half of 1985 confirm earlier trends which showed the coastal provinces to be both much more heavily industrialized and growing more rapidly than interior provinces. The same data show that the economy-wide industrial slowdown in the second half occurred relatively evenly in all regions, although the interior fared somewhat more poorly while the South Coastal provinces grew most rapidly both before and during the slowdown. Not only are coastal provinces more industrialized overall, for certain sectors the imbalance is even more striking, such as for machinery, chemicals and other heavy industrial sectors.

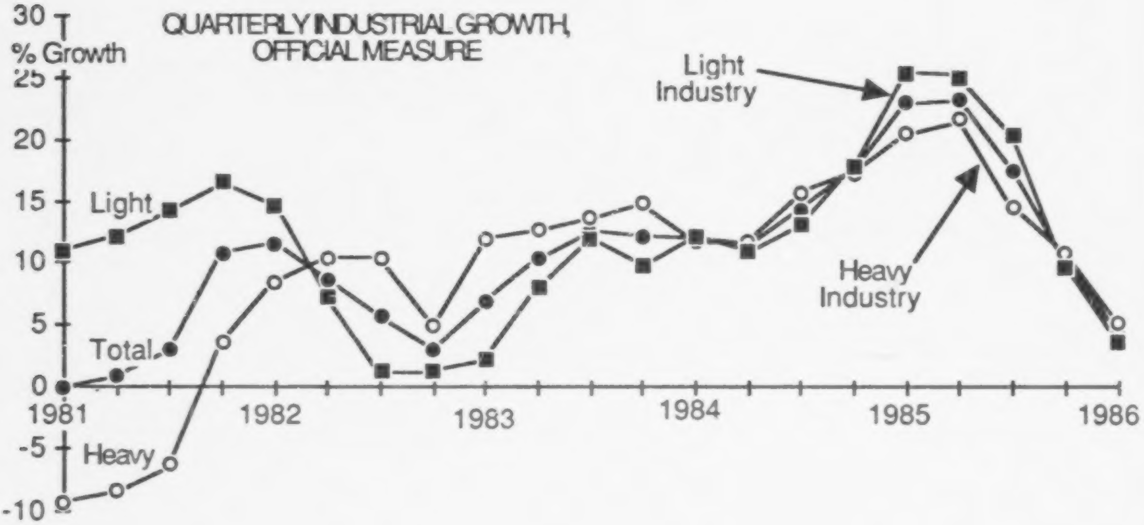
In sum, China's industry has experienced very rapid growth, been subjected to a state-sponsored slowdown to control inflation, has recovered in the first half of 1986, and has shown the industrial reforms to be effective in strengthening output by collective enterprises in particular. Although the period of growth correction apparent in late 1985 appears to be over, the nature of the 1986 recovery is not yet clear.

POLICY

China's industrial policy is a combination of reforms in enterprise management, correction of state price imbalances, investment emphasis on energy and chemicals, and both credit and state investment controls to limit the inflationary impact of the overall reform program. The overall strategy is intended to increase product quality and have output better match the needs of consumers, including the export market. Many of the policies are transitional, as China shifts its industrial management system from one relying heavily on ministerial control and allocation to one based on enterprise management initiatives with the freedom to make numerous management decisions without consulting with central authorities. In this sense, the 1986 reforms are the continuation of a longer process of experimentation and adjustment which is still in a stage of considerable flux.

By far the single most salient industrial policy shift in 1985-86 was the decision to combine state investment cutbacks and controls on credit to contract output in the second half of 1985. The reason for the contraction was the need to control inflation, which by the of middle 1985 had reached 30 percent in some markets. These steps represent a major experimentation with the manipulation of macroeconomic variables to achieve policy goals. In part the more indirect measures have been made necessary by the success of the enterprise reforms. Quarterly and monthly data on investment and money supply show that the contractionary steps came in the August-November period of 1985, and that by the first quarter stimulative policies, especially those expanding the money supply, were in full force.

Diagram 3-2



As successful as these control policies seem to have been in the winter of 1985-86, they introduced the worry that policies to control inflation might also slow the industrial management reform program, which had been responsible for so much of the industrial growth. This does not seem to have happened, and the over-arching policy of fundamental urban industrial reform, in many dimensions, continues to dominate China's industrial development strategy.

Urban reforms, primarily intending to decentralize industrial control, were formally announced in October of 1984, but they began much earlier in the decade in a series of experiments and partial reforms which continued to broaden their scope. The first phase of industrial reforms covered three areas. First, they called for taxes to continue to take the place of profit delivery. (For details on tax reform, see Chapter 6, Banking and Finance.) Second, factory managers were given greater responsibility for plan and managerial decisions. Third, departments were streamlined to give more power to enterprises over production, sales, prices, use of funds, personnel affairs and joint ventures. The number of mandatory plan targets under the State Planning Commission has been reduced from 365 to 65.

By May of 1985, 10,000 enterprises nationwide were experimenting with the transfer to factory directors of full responsibility for their enterprises' wages, production and finances. The program had achieved some success, although it was not without political problems. It benefited the system of workers' congresses since the directors needed the backing of the workers. But problems were cited, such as clarifying the relationships between factory directors party committees and workers, and directors who abused their powers for their personal gain. Nonetheless, although it was still considered an experiment, regions and departments were encouraged to select more enterprises to expand the program.

As of June at least one province, Jiangxi, was promoting a responsibility system in large and medium businesses with the plant director, entrusted by the state, controlling the plant's production and operation. Under this system, the party secretary in the plant is subordinate to the director. At the same time, the province emphasized the need to relax control and insure that enterprises make clear a legal separation from local governments. Obligations to other departments and expenses other than paying taxes were strictly banned.

The reform process continued with wage reforms in the summer of 1985, under which the state adopted regulations tying wages to economic performance, to provide workers with incentives similar to those already in place in rural areas. The state economic commission announced plans to link wages and bonuses to taxes and profits. However, the tax on wages in state owned industries is sharply progressive, designed to discourage excessive bonuses and wage increases. The tax rate is zero for any increase in wages less than 7 percent over 1984's and thereafter increases rapidly to 100 percent for raises of between 12 and 20 percent. A 300 percent tax is levied on wage hikes over 20 percent.

In late summer two steps were taken to counter additional ongoing problems in industry: the high number of firms with consistent economic losses, and the decline in the quality of industrial output. First, a bankruptcy process for struggling enterprises was introduced. Formerly, they would have been merged with profitable enterprises. The new regulations allow the proper authorities from banking, tax, insurance and auditing departments as well as creditors to dispose of the frozen assets of a bankrupt firm and establish a fund to provide relief for workers laid off due to bankruptcy. Then, in September, the State Economic Commission announced plans to oversee about 100 quality inspection centers and quality-test stations to run quality checks on up to 200 major industrial products every three months. However, the fundamental approach to product quality is to rely on technological progress with the underlying assumption that current quality problems will work themselves out naturally as technology improves.

The policy and plans for 1986 have emphasized consolidation efforts such as improving the factory director management, decreasing corruption and increasing product quality. The Seventh Five Year Plan (1986-90) calls for 70 to 90 percent of Chinese industrial products to adapt international standards for their products. To implement this policy, managers will be held responsible and those who achieve these standards will be offered preferential treatment for energy supplies, transportation, taxes, loans and foreign currency. Also, greater price ranges will be used to reflect quality gradations.

But in several important dimensions, 1986 industrial policy involves far more than consolidation of past changes. Price reforms have continued in the first half of the year, most noticeably for prices of cement and steel, raising the prices of scarce products and lowering those for lower quality output. Even more dramatic are the advance stages of management reforms reported for the city of Shenyang, where over 100 enterprises have been leased outright to managers, where all cooperative industrial enterprises have reportedly been required to sign strict bankruptcy regulations, and where enterprise employees have purchased ownership shares in their plants on a large scale. Although direct statistical evidence on the success of management reforms is difficult to obtain, anecdotal evidence strongly supports the conclusion that industrial policies in 1986 are continuing the ambitious changes begun in 1983-85 and carrying them into new areas.

A final policy shift reflects a major break with regional strategies of China's Maoist past. In the first half of 1986 official sources announced and described the "ripple" policy by which industrial growth in coastal regions would receive priority, allowing the benefits to "ripple" first to the belt of provinces just away from the coast and subsequently to provinces deep in China's western interior. In other words, the new regional policy formally does away with strategies to place emphasis on industrial development of the interior in favor of a three-zone strategy: coastal, near-coastal, and interior, with the coastal zone clearly receiving priority.

PROBLEMS

The problems facing China's industry are both economic and political. Most fundamentally, enterprise management is still constrained by administrative controls which inhibit decisions aimed at improving plant efficiency and profitability. Closely related is the problem of China's industrial price system, which because of its poor reflection of scarcity or consumer demand, provides unreliable signals for investment decisions and hence is one reason why greater independence for enterprise managers has come so slowly. Ironically, the only long-term solution to China's price system could be management reform itself, to provide the incentives to set and demand prices more closely reflecting market conditions.

The political problems are focused most directly on the struggle between mid-level bureaucrats on the one hand and the enterprise managers and reform-minded national leadership on the other. Additional problems come from provincial, county, and township officials who want to replace ministerial control of enterprises with regional control and, hence, are in conflict with enterprise managers and national leadership. Although these problems are important, they are difficult to analyze within an economic framework. It is nevertheless possible to say that the critical factor is the continued dominance of national policy by leaders dedicated to continuing the management reforms. In many ways, the degree of publicity being given to these problems in the Chinese press is also one measure of the seriousness of the effort to overcome them.

Among the more economic and technical problems, the most noticeable are: poor quality of materials and labor, shortages of energy, raw materials, and skilled technicians, poor judgement in investment decisions, continued losses requiring subsidies, uncertain tax burdens, inflation, and policy-induced macro-economic instabilities. Many of these traditional problems have been exacerbated by the rapid 1984-85 industrial growth.

Low quality products, frequently counterfeits of famous Shanghai brand consumer goods, are increasingly reported. The State Economic Commission reported in 1985 that there has been a marked trend towards product deterioration since the very high growth period began. The goods cited have ranged from automobiles, bicycles and wristwatches to cigarettes, food and medicine.

Some sectors are still following incorrect price signals, leading to excessive, unbalanced, or inadequate growth. Recurrent shake-outs in various industries are anticipated, as investment misjudges market potential. A shortage of cotton yarn in Shanghai, a major textile center, illustrates the skewed growth produced by poor price signals. The textile ministry reports that the shortage resulted from rapid increases in post-processing capacity while capacity for the less profitable cotton yarn production remained constant. In addition, more of the cotton produced was being sold to village and township enterprises at higher prices than the Ministry's state enterprises. Although price adjustments would be the "natural" solution to the problem in a market economy context, these have continued to face stiff resistance from state enterprises accustomed to preferential treatment. Instead, to deal with shortages, preferential tax treatment will be offered to enterprises producing less profitable products, and the distribution of profits will be readjusted to encourage cotton yarn production.

Losses by state-run enterprises continue to be a burden on state finances, despite reforms calling for independent accounting and enterprise responsibility for profits and losses. The national budget for 1985 anticipated that losses incurred by state industrial enterprises this year would be 20 percent lower than in 1984. However, preliminary state budget data for 1985 show that total subsidies have increased substantially. (For details, refer to Chapter 6 on Banking and Finance.)

Crucial industrial goods are still subject to state plans, for which enterprises sign contracts with the state. After they have fulfilled contracts with the state, enterprises can sell their remaining goods in the "free" market or at negotiated prices. However, since the state prices are lower than market ones, contract fulfillment has been low. In one example cited, the Anshan Iron and Steel Company had supplied only 23 percent of their contracted pig iron to the state in the first half of 1985.

Tax burdens on enterprises are heavy, especially for the large state enterprises which are supposed to be the key to urban reforms. According to Xinhua surveys in 1985, roughly 80 to 90 percent of their profits were delivered to the state. Collective enterprises in cities and towns delivered roughly 50 percent, while village industries delivered only 30 percent. In Changsha, a city in Hunan province, town-run enterprises provided 56.5 percent of county revenues in 1984, despite provincial regulations stating profit delivery should be less than 30 percent. Enterprises have been asked to pay up to 30 kinds of charges. Enterprises under the coal departments received the most random charges and had their prices forced down by local officials, despite the production and marketing problems faced by the coal industry.

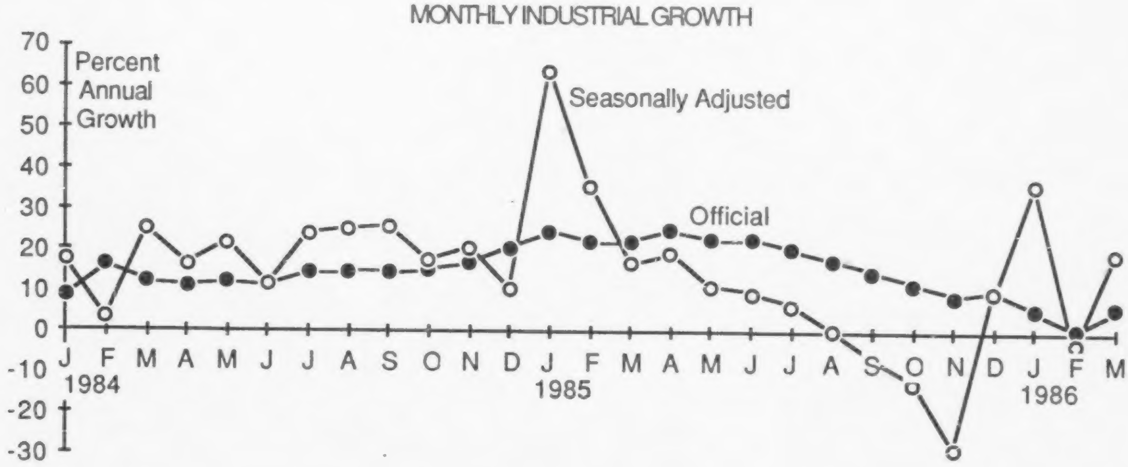
In addition to these various micro-economic problems, there is also the emerging problem of macro-economic instability. China appears to be entering a period of cyclical high growth and sudden slowdown periods. Interestingly, the problem of instability is made worse by the official monthly measures of industrial growth which report shifts in output growth only with a delay, thereby also delaying needed policy shifts. For example, stimulative policies were continued into early 1985 because it was not clear that they had already worked in the Fall of 1984. Similarly, in the Fall of 1985, policies in October and November continued to dampen credit and investment activity, when seasonally adjusted data showed the contractionary steps taken in the summer had already worked. The continuation of contractionary policies when restimulation was appropriate exacerbated the late 1985 decline. It is too early to tell if the 1986 industrial recovery will in turn lead to another inflationary boom period.

The problems facing China's industrial development, then, are many and complex. In general, however, most of them appear to respond to the numerous steps generated by the overall reform movement. As a result, perhaps the most fundamental problem would be a weakening of the reform process and the commitment to it by China's leadership. At present this problem does not appear to be a serious one, but it is the area deserving the most careful monitoring.

PROSPECTS

By far the most intriguing but as yet highly uncertain prospect for China's industry is that of large-scale divestiture of state and collective enterprises to individual lease-holdings. With the current leadership and the enterprise management goals of the new five year plan, this evolution in the control of industry into essentially private hands is the most likely mechanism for achieving the enterprise independence which now appears to be at the heart of China's industrial policy. But such a trend, if it comes, will come relatively gradually, and in the meantime, attention will focus on industrial growth achievements under the more transitional conditions already apparent in 1985-86. The shifts in value and ownership of industrial output from state to collective and other forms which are so evident in Table 3-5 are expected to continue.

Diagram 3-3



In the short-term, China's 1986 industrial recovery from the mild recession in late 1985 should bring 10-12 percent growth for 1986 overall, but given the speed with which the economy responds to government shifts in investment and credit policy, short-term prospects are subject to a considerable margin of uncertainty. In the longer run, some moderation in the high rates of industrial growth of the mid-1980s is certain. But even if growth settles at a rate of, say, 15 percent, China's economy will quickly find itself transformed, with industrial output in 1995 as much as four times what it was in 1985. One thing is clear; the 8-percent goals set for real industrial growth in the Seventh Five Year Plan (1986-90) are likely to be exceeded by a considerable margin.

In regional terms, China's coast will certainly remain the preeminent industrial area in virtually every sector, and the disparity between per-capita industrial output of coastal and interior provinces will widen.

The structure of industrial output is expected to continue to shift substantially towards more labor-intensive branches. Although the development of light industry has been rapid, consumer purchasing power has grown, and tastes have become increasingly more sophisticated. Priority will be given to higher quality and brand name consumer goods. With the bulk of light industrial goods being produced by small and medium plants, there will be more need for technological transformation than construction of wholly new plants. As state investment funds concentrate on heavy industrial projects, light manufacturing enterprises will increasingly come to rely on their own or foreign funds to upgrade and renovate existing capacity. (For more detail on investment, see Chapter 5.)

Above all, the program of piecemeal urban industrial management reforms, seeking to shift control of day-to-day enterprise management decisions from ministries and local officials to the plant manager, will continue to make headway, and, unless there is some unforeseen major shift in national leadership, seems likely to accelerate in the late 1980s and change the fundamental nature of Chinese industrial organization.

Table 3-6

STATISTICAL APPENDIX: INDUSTRIAL OUTPUT AND GROWTH

(Item)	(Units)	1981	1982	1983	1984	1985
Cotton Yarn						
	(million tons)	3.2	3.4	3.3	3.2	3.5
	(percent growth)	8.3	5.8	-2.5	-1.6	9.0
Total Cloth						
	(billion meters)	14.3	15.4	14.9	13.7	14.3
	(percent growth)	5.9	7.6	-3.1	-7.9	4.4
Chemical Fibers						
	(thousand tons)	527.3	517.0	540.7	734.9	945.0
	(percent growth)	17.1	-2.0	4.6	35.9	28.6
Woolen Piece Goods						
	(million meters)	113.1	126.7	142.9	180.5	210.0
	(percent growth)	12.0	12.0	12.8	26.3	16.4
Paper and Paperboard						
	(million tons)	5.40	5.89	6.61	7.56	8.26
	(percent growth)	.9	9.1	12.2	14.4	9.3
Beer						
	(million tons)	.91	1.17	1.63	2.24	3.08
	(percent growth)	31.9	28.6	39.3	37.4	37.3
Cigarettes						
	(million cases)	17.0	18.9	19.4	21.3	23.5
	(percent growth)	12.1	10.6	2.8	10.0	10.3
Bicycles						
	(millions)	17.5	24.2	27.6	28.6	32.4
	(percent growth)	34.7	37.9	14.0	3.7	13.1
Sewing Machines						
	(millions)	10.39	12.86	10.87	9.35	9.86
	(percent growth)	35.3	23.8	-15.5	-14.0	5.5
Total Television Sets						
	(thousand sets)	5,394	5,920	6,840	10,038	16,220
	(percent growth)	116.5	9.8	15.5	46.8	61.6
Color Television Sets						
	(thousand sets)	152	288	531	1,340	4,100
	(percent growth)	375.0	89.5	84.3	152.2	206.1
Cameras						
	(thousands)	623	742	926	1,262	1,800
	(percent growth)	67.1	19.1	24.7	36.3	42.7
Household Washing Machines						
	(thousands)	1,281	2,533	3,659	5,781	8,830
	(percent growth)	422.9	97.7	44.5	58.0	52.7
Household Refrigerators						
	(thousands)	. .	100	189	547	1,390
	(percent growth)	. .	. . .	88.7	190.4	153.9
Metal Cutting Machine tools						
	(thousands)	102.6	99.8	121.0	133.5	155.0
	(percent growth)	-23.2	-2.7	21.2	10.3	16.1
Automobiles						
	(thousands)	175.6	196.3	239.8	316.4	439.0
	(percent growth)	-21.0	11.8	22.2	31.9	38.7

(Item)	(Units)	1981	1982	1983	1984	1985
Coal						
	................(million tons)	622.0	666.0	715.0	789.0	850.0
	..............(percent growth)	.3	7.1	7.4	10.4	7.7
Crude Oil						
	................(million tons)	101.2	102.1	106.1	114.6	125.0
	..............(percent growth)	-4.5	.9	3.9	8.1	9.0
Natural Gas						
	.......(billion cubic meters)	12.7	11.9	12.2	12.4	12.9
	..............(percent growth)	-10.7	-6.4	2.3	1.8	3.5
Electrical Power						
	.....(billion kilowatt-hours)	309.3	327.7	351.4	377.0	407.3
	..............(percent growth)	2.9	5.9	7.2	7.3	8.0
Hydropower						
	.....(billion kilowatt-hours)	65.5	74.4	86.4	86.8	91.0
	..............(percent growth)	12.5	13.6	16.1	.5	4.8
Pig iron						
	................(million tons)	34.2	35.5	37.4	40.0	43.6
	..............(percent growth)	-10.1	3.9	5.3	7.0	9.0
Steel						
	................(million tons)	35.6	37.2	40.0	43.5	46.7
	..............(percent growth)	-4.1	4.4	7.7	8.6	7.3
Rolled Steel						
	................(million tons)	26.7	29.0	30.7	33.7	36.8
	..............(percent growth)	-1.7	8.7	5.9	9.8	9.1
Cement						
	................(million tons)	82.9	95.2	108.3	123.0	142.5
	..............(percent growth)	3.8	14.8	13.7	13.6	15.8
Plate glass						
	.....(million standard cases)	30.6	35.5	41.7	48.3	56.1
	..............(percent growth)	10.6	15.7	17.5	15.9	16.1
Sulphuric acid						
	................(million tons)	7.81	8.18	8.70	8.17	6.69
	..............(percent growth)	2.1	4.7	6.4	-6.0	-18.1
Soda ash						
	................(million tons)	1.65	1.74	1.79	1.88	2.00
	..............(percent growth)	2.4	5.0	3.3	4.9	6.4
Caustic soda						
	................(million tons)	1.92	2.07	2.12	2.22	2.35
	..............(percent growth)	.0	7.8	2.4	4.7	5.6
Total Chemical fertilizer						
	................(million tons)	12.4	12.8	13.8	14.6	13.4
	..............(percent growth)	.6	3.2	7.9	5.9	-8.6
Chemical pesticides						
	................(million tons)	484.0	457.0	331.0	298.5	205.0
	..............(percent growth)	-9.9	-5.6	-27.6	-9.8	-31.3
Plastics						
	................(million tons)	.92	1.00	1.12	1.18	1.21
	..............(percent growth)	2.0	9.5	11.8	5.3	2.4
Mining equipment						
	...............(thousand tons)	114.9	158.2	201.6	258.1	301.2
	..............(percent growth)	-29.3	37.7	27.4	28.0	16.7
Power Generating Equipment						
	..........(thousand kilowatts)	1.40	1.65	2.74	4.67	5.61
	..............(percent growth)	-66.7	17.9	66.6	70.6	20.0

SOURCES: State Statistical Bureau, **1985 Statistical Yearbook**, and 3/86 Communique on plan fulfillment.

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CHAPTER FOUR -- Energy

EXECUTIVE SUMMARY

TRENDS
- Rapid growth in energy output growth levels for March and April of this year signal a return to earlier patterns after the slowdown of late 1985 and the first two months of 1986.
- Accelerated declines in international oil prices have cut petroleum export earnings.
- Sustained energy conservation in industry, together with output growth, have for now eased the once-critical energy bottleneck.

POLICY
- Investment in energy remains a high priority.
- Petroleum export volumes are being cut as the State decides that domestic opportunity costs for oil are higher than potential export earnings.
- Very large projects requiring imported technology have been postponed.

PROBLEMS
- Energy's biggest problems are its low relative pricing, low level of technical sophistication, and geographic isolation.
- The world energy glut offers little hope for increases in energy prices in the short-term.

PROSPECTS
- China's plan to double energy output by 2000 is conservative.
- The best prospects for foreign participation are in coal and onshore oil.

TRENDS

China's energy sector has ceased to be the bottleneck it was perceived to be in the early and mid-1980s. Rapid and sustained increases in energy output from 1981 through mid-1985 and an effective energy conservation program have greatly mitigated the severity of China's chronic energy shortage. The energy sector remains plagued by low technology levels, both in primary production and secondary conversion. Falling world oil prices have lowered China's incentive to export, and volume exports of crude petroleum began to fall off in early 1986.

After slow growth and stagnation in 1980-81 and recovery in 1982, China's energy output grew at an average annual rate of over 10 percent from 1983 through the first six months of 1985. In the second half of 1985, however, energy output slowed significantly, so that by early 1986 official monthly energy growth was negative for coal, implying that output on a seasonally adjusted basis had declined precipitously in the second half of 1985. Just as in the energy slump of 1980-81, however, the slowdown at the end of 1985 was not the result of any technical or structural shortcomings in the industry, but rather had its origins in state investment cutbacks, reduced subsidies, and new controls on credit, all intended to slow the 1985 economy and moderate the pace of inflation.

The monthly data for later in the spring of 1986 show that energy output recovered in early 1986, but in the absence of seasonally adjusted data, the strength of the recovery is difficult to gauge without additional information.

Overall, however, it is safe to say that just as for industry in general, but to a somewhat more exaggerated degree, energy output responded sharply to new government macroeconomic controls in late 1985, and has since begun what may be an equally quick recovery.

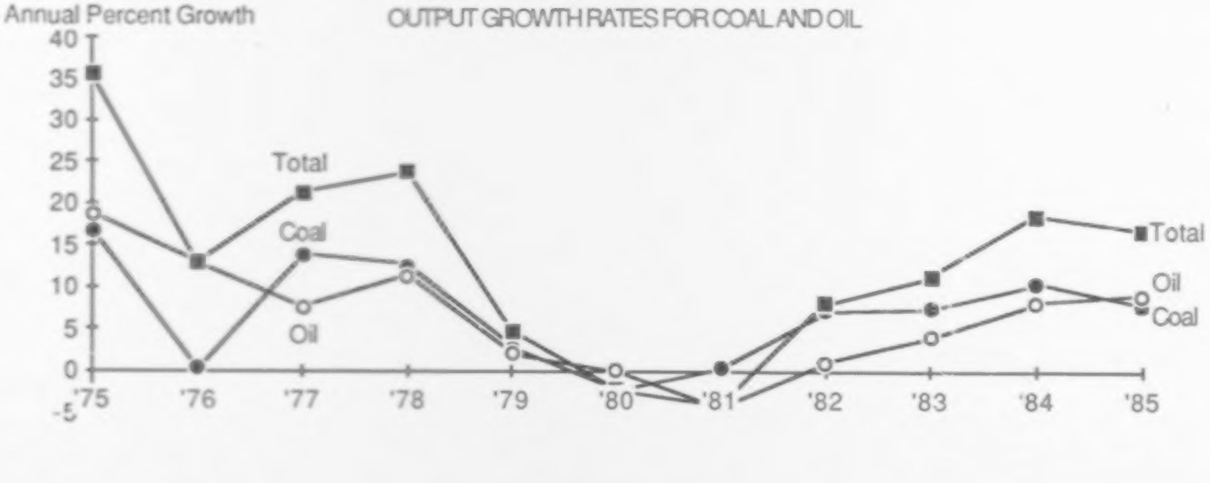
Table 4-1
PRIMARY ENERGY OUTPUT, 1975-86

	COAL	CRUDE OIL	NATURAL GAS	HYDRO-POWER	TOTAL
		(Percent Growth)			
1975	**16.7**	**18.8**	**17.5**	**15.0**	**17.2**
1976	.2	13.1	14.1	-4.2	3.5
1977	13.9	7.4	20.0	4.4	12.3
1978	12.4	11.1	13.3	-6.3	11.9
1979	2.8	2.0	5.7	12.3	2.7
1980	**-2.4**	**-.2**	**-1.7**	**16.2**	**-1.6**
1981	.3	-4.5	-10.7	12.5	-1.1
1982	7.2	.9	-6.3	13.6	5.4
1983	7.2	3.9	2.3	16.1	6.5
1984	10.5	8.1	1.7	.5	9.6
1985	**7.7**	**8.9**	**3.5**	**4.8**	**7.9**
		(Million Tons Standard Coal Equivalent)			
1985	607.14	178.45	17.11	11.17	813.87

SOURCES: Official State Statistical Bureau data. (J5AF30.R6D)

For coal, however, these fiscal and financial policies had a doubly contractionary effect, since the large state-operated mines are extremely sensitive to cuts in investment funds, while the local more independent small mines rely on bank credit for much of their operating capital. Each component accounts for roughly half of coal output. See Table 4-2, below, for monthly energy growth patterns according to official calculation methods. (For a discussion of these methods, see Chapter 3 on industry.)

Diagram 4-1



Although the time period is shortened, comparisons with energy output patterns early in the decade are instructive. China's respectable recovery in energy output after the 1980-81 recession is shown clearly in Table 4-1, above, which gives growth rates for major primary energy sources. The bottom row gives physical output levels for 1985, illustrating how coal dominates China's energy sector, providing three times more primary fuel than oil. Together, coal and oil account for almost all (96 percent in 1985) of China's energy output.

In spite of the late 1985 slowdown, coal's growth performance on an annual basis has been sustained since 1982, with output growing at decade-doubling rates (roughly 7 percent) since 1982. Overall, 1985 coal output exceeded the original official 790 million ton target by 60 million tons (data in Table 4-1 are in "standard tons;" actual output was 850 tons of raw coal). Oil output, again allowing for the late 1985 slow-down, has since 1983 enjoyed sustained, rapid expansion, with output growing 8.9 percent in 1985.

Table 4-2
GROWTH IN MONTHLY ENERGY OUTPUT 1985-1986

Month	Coal	Crude Oil	Natural Gas	Electricity	Hydro-Power
Growth Rates (Percent)					
1985 Jan	16.6	9.4	5.8	10.4	7.3
Feb	10.3	9.0	6.1	4.6	-2.8
Mar	6.0	12.3	6.0	7.6	2.5
Apr	11.6	12.5	13.9	9.9	14.1
May	11.0	9.9	6.0	8.4	2.7
Jun	18.7	11.1	7.8	9.2	6.8
Jul	11.9	10.6	5.8	8.3	-5.8
Aug	9.2	7.6	5.5	7.1	5.3
Sep	10.0	6.8	6.4	8.0	7.4
Oct	9.0	6.6	-2.3	8.4	3.5
Nov	5.6	6.2	7.7	8.9	14.2
Dec	9.3	5.9	-9.8	10.4	9.6
1986 Jan	-3.3	3.9	.5	6.0	-3.7
Feb	-3.7	1.4	8.9	6.4	-7.8
Mar	7.1	.6	7.8	9.3	-1.2
Apr	-1.6	-2.0	-5.0	-2.4	20.7
May	6.0	4.6	6.6	5.4	26.3
Output *		(see the table in ch 3)			
May	75.83	10.84	1.20	37.57	8.60

* Reported as follows: Coal and Oil in million tons, Natural Gas in hundred million cubic meters, Electricity in billion kWh.

SOURCES: State Statistical Bureau, **Monthly Bulletin of Statistics** (in Chinese), electricity from **China Economic News**, various issues. March, 1986 through May, 1986 data from **China Economic News**. (j6bci01t.d6f,di)

The 1980-81 recession, rather than a planned slowdown for "readjustment" as often depicted by Chinese officials, was a reaction to severe budget cuts after the 1979 Vietnam fighting, sharply increased food subsidies, and excessive investment spending during the 1977-78 "mini-Great Leap." These budget cuts affected the subsidies on which the energy industry, and in particular coal, because of its low pricing, so heavily depends. In addition, 1981 investment levels fell dramatically, as illustrated in Table 4-3 below. This is especially true for the coal industry, where state investment fell by over 30 percent in 1981, and the oil industry, where investment fell by 16.3 percent.

Table 4-3
State Capital Construction in Energy, 1978-1985
(Million current yuan)

	Coal Industry	Oil Industry	Power Industry	Total Energy*
1978	3,180	3,112	5,091	11,470
1979	3,186	2,707	5,099	11,098
1980	3,347	3,338	4,814	11,565
1981	2,315	2,795	4,014	9,464
1982	2,985	2,530	4,623	10,223
1983	4,007	2,902	5,746	12,760
1984	5,514	3,063	7,699	16,673**
1985	N/A	N/A	N/A	20,105**

* NOTE: Total includes coking industry.
** Total from State Statistical Bureau, **Monthly Bulletin** (2/86)
SOURCES: Official State Statistical Bureau yearbooks.

As Table 4-3 illustrates, investment levels recovered in 1983, and have grown rapidly since then, increasing by over 30 percent in 1984. Total energy investment continued its strong expansion through 1985, increasing by 21 percent over 1984 levels in current-priced terms. This recovery and subsequent strong growth in investment point to continued output gains for both coal and electric power. Investment in the petroleum industry does not seem to have increased at a pace comparable to that for coal and power generation, and 1984 oil investment levels were still roughly 10 percent below the 1980 level.

China's strong energy output potential, confirmed by figures for production through the first six months of 1985 and the recovery in 1986 , has been unrelated to prospects for as-yet elusive successes in offshore exploration or completion of the large-scale coal mining operations planned for later in the decade. Offshore drilling has yielded disappointing results, and the highly visible Chinese-foreign ventures for coal extraction are not yet on line. For oil, the output growth has come from existing fields. In the past two years Chinese engineers have been relatively successful at increasing petroleum flows at fields where output was believed to have already peaked, such as Daqing. New on-shore oil discoveries and developments such as the Taklimakan desert basin have also contributed to growth.

For coal, output growth can be interpreted as resulting from decentralized management of mines. This is shown clearly in Table 4-4, below, where output from state-owned mines has grown 2.9 percent in the six years since 1979, while output from local mines has grown 9.1 percent -- more than three times as fast.

Table 4-4
HISTORICAL OUTPUT OF COAL BY OWNERSHIP TYPE

	1979	1980	1981	1982	1983	1984	1985
Total Output (mn tons)	636	620	622	666	715	789	850
State Mines	358	344	335	350	382	412	421
Local Mines	278	276	287	316	333	377	429
Share of Total (percent)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State Mines	56.3	55.5	53.9	52.5	53.5	52.2	49.5
Local Mines	43.7	44.5	46.1	47.5	46.5	47.8	50.5

SOURCES: Official data and press releases. Breakdown calculated for 1984 and 1985 from 1985 output for local mines (reported in **China Economic News** 2/24/86, p. 1 as 429 million tons, 13.9 percent higher than 1984).

The share of output from local mines has risen further in 1985, from 48 to 51 percent of total output. In fact, output from local mines is growing much faster than planned. Preliminary data for 1985 indicate that local coal production grew at a rate of 14 percent over 1984, while output from state mines only grew 2.2 percent. This national trend is complemented by regional developments. For example, in Henan province, China's second largest coal producer (after Shanxi), first quarter 1985 output from small rural mines was twice that of the first quarter of 1984, while output from state mines lagged far behind.

Diagram 4-2

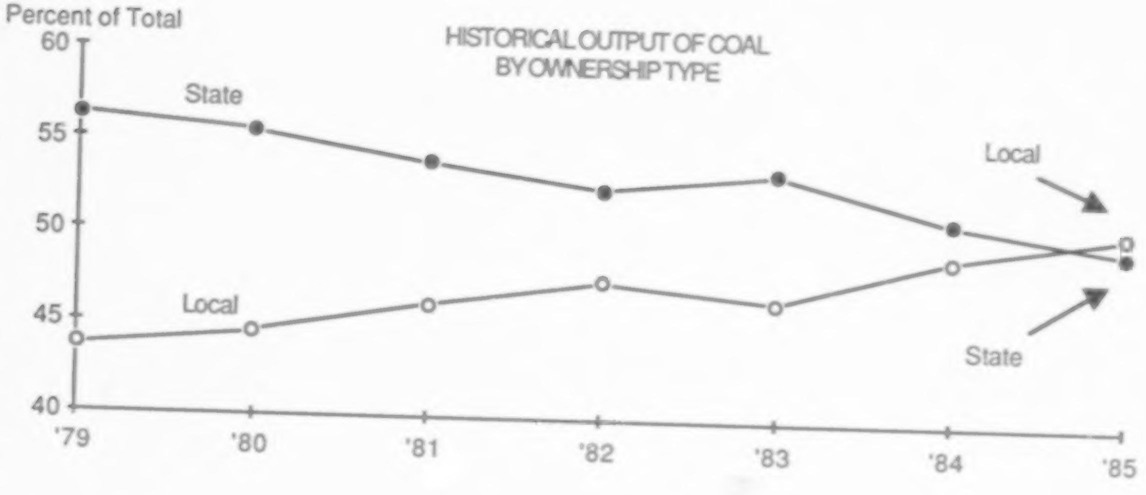


Table 4-5
ENERGY SUPPLY AND DEMAND IN CHINA, 1970-1984
(Million Tons Standard Coal Equivalent)

	COAL			CRUDE OIL			TOTAL ENERGY		
YEAR	Production	Consumption	Stock Changes and Net Exports	Production	Consumption	Stock Changes and Net Exports	Production	Consumption	Stock Changes and Net Exports
1970	252.8	236.9	15.8	43.8	43.0	.9	302.9	285.3	17.6
1971	279.9	273.2	6.7	56.4	55.2	1.2	344.3	336.4	7.9
1972	292.7	288.9	3.8	65.3	64.0	1.3	368.0	362.9	5.1
1973	297.7	292.7	5.0	76.7	72.7	4.0	387.1	378.1	9.0
1974	294.9	289.6	5.3	92.7	83.2	9.6	402.7	387.9	14.9
1975	344.1	326.4	17.8	110.2	95.7	14.5	472.0	439.1	32.8
1976	344.9	334.4	10.5	124.6	110.0	14.6	488.5	463.4	25.1
1977	392.7	367.8	24.9	133.9	118.4	15.5	548.6	508.1	40.5
1978	441.3	403.8	37.4	148.8	129.9	18.9	613.8	557.5	56.3
1979	453.4	417.8	35.6	151.8	127.7	24.1	630.6	570.9	59.8
1980	442.7	432.8	9.9	151.5	126.9	24.6	620.3	585.8	34.6
1981	443.8	432.4	11.4	144.7	118.4	26.3	613.6	575.9	37.7
1982	475.8	457.8	17.9	146.0	115.6	30.4	646.8	600.3	46.5
1983	510.2	483.9	26.3	151.7	121.8	29.8	688.7	632.7	56.0
1984	563.4	531.3	32.0	163.9	124.9	39.0	754.4	683.5	70.9

NOTE: Production and consumption for natural gas and hydroelectric power are included in the total but not shown.
SOURCES: Official statistics and RCR calculations (de018s.r5b, de).

Equally as important as increased output levels have been the rapid strides made by the Chinese in energy conservation. Since the mid-1970s, China has controlled domestic energy consumption, causing it to grow more slowly than output and allowing a larger and larger surplus to be either exported or added to inventories. Only in 1980 was the sudden slump in output not matched by an equivalent fall in consumption. Although data on consumption or change in inventories for 1985 are not yet available, there is evidence that energy consumption restraint has continued. A study from Shanghai, China's major industrial center, reported that of the energy consumed to raise output in the first five months of 1985, 80 percent came from energy conservation, while only 20 percent of the growth in output was fueled by new energy supplies. Table 4-5 below illustrates energy conservation since 1978 by showing the increase in consumption to be slower than the increase in output.

The large increase in petroleum exports registered in 1985 is further evidence of conservation gains. Crude oil export volume in the first two quarters of 1985 grew by 41.7 percent over the first half of 1984, far outstripping growth in output of 10.9 percent. Coal exports, however, fell by 2.4 percent in the same period, whereas output grew by 11.8 percent. This discrepancy may indicate success in conserving oil and in the campaign to convert energy users from petroleum to coal, largely so petroleum exports could be increased in the face of falling prices.

Table 4-6
ECONOMY-WIDE ENERGY SAVINGS, 1979-84

	Overall Economic Growth	Energy Consumption	Energy Use per Unit Output
	(percent growth)		
1979	7.0	2.4	-4.3
1980	6.4	2.6	-3.6
1981	4.9	-1.7	-6.3
1982	8.3	4.2	-3.8
1983	9.8	5.4	-4.0
1984	13.9	8.0	-5.1

SOURCES: Official statistics and RCR calculations (de021s.r6d, de).

Table 4-6, above, compares overall economic growth with consumption of energy and shows the very large sustained gains from energy conservation through 1984. Comparable data on domestic energy consumption in 1985 are not yet available. As Chinese officials have pointed out, a portion of recent energy savings is due to changes in the economic structure. In part, this is due to a shift from heavy industry, a major consumer of energy, to light industry, where output value is higher per unit of energy input. However, this shift should not be over-emphasized, since heavy industry still represents half of industrial output. Within heavy industry, less efficient plants have been shut down. In both industry and agriculture, emphasis is shifting to higher value-added products, with correspondingly lower energy input per unit of output value.

Table 4-7
INTERNATIONAL ENERGY CONSUMPTION COMPARISONS, 1981

	Per Capita GNP (US $)	Per Capita Energy (Kg Coal)	Per Capita Coal (Kg)	Per Capita Thermal Power (Kwh)	Thermal-Coal Ratio (x1000)	Energy Per GNP $ (Gram)	Coal Per GNP $ (Gram)
United States	13,160	11,626	2,515	7.94	3.2	883	191
Brazil	2,240	1,101	66	.10	1.5	492	30
China	310	618	436	.12	.3	1994	1406
India	260	210	128	.11	.9	808	490
Japan	10,080	4,649	791	3.43	4.3	461	78
Korea, South	1,910	1,563	669	.98	1.5	818	350
Germany, West	12,460	6,053	2,011	4.81	2.4	486	161
Poland	5,635	5,799	3,872	3.12	.8	1029	687
U.S.S.R	6,619	6,422	1,870	2.12	1.1	970	282

NOTE: Per capita Energy and Energy per GNP $ are measured in terms of standard coal units (7000 kcal/ton).

SOURCES: Various World Bank and U.N. publications, and other sources. For details contact Rock Creek Research.

China can achieve these energy savings because her overall use of energy is so inefficient by world standards. Table 4-7 above illustrates China's highly inefficient use of energy, and in particular the inefficient use of coal, the energy source on which Chinese industry is most dependent.

Data in Table 4-7 on energy and coal requirements per unit of GNP show how inefficiently China uses what energy resources it has. Japan, the most efficient energy user, produces more than four times as much with each unit of energy input. China uses more than twice as much coal per GNP dollar as Poland, the next most inefficient user. Poland is almost as reliant upon coal as China is. It is also interesting to see in Table 4-7 how little of China's coal is used to generate thermal electricity, reflecting both inefficient generation and large-scale direct use of coal for industrial purposes.

Electric power output growth in China has averaged 7 percent a year since 1980. Patterns of thermal power generation and shortage confirm the inefficient use of energy in general and the critical need for power generating and transmission capacity. In spite of consistent growth in electrical power generation over the last ten years (see Table 4-8 below), China's power supply still is unable to meet demand. Chinese officials consistently cite surveys which show that 30 percent of industrial capacity is idle at any given time because of electric power shortages.

In addition to using little of its coal to generate electricity, China generates thermal power inefficiently. China is about half as efficient as some advanced countries in this field; its efficiency is expected to improve as much as 40-50 percent by the end of the century. Data on China's generation of electric power are presented in Table 4-8, below.

Table 4-8
ELECTRIC POWER GENERATION, 1975-85

	Thermal Power	Hydro-Power	Total
(percent growth rates)			
1975	16.3	15.0	16.0
1976	6.3	-4.2	3.7
1977	11.6	4.4	10.0
1978	20.6	-6.3	14.9
1979	9.4	12.3	9.9
1980	4.5	16.2	6.6
1981	.6	12.5	2.9
1982	3.9	13.6	5.9
1983	4.6	16.1	7.2
1984	9.5	.4	7.3
1985	9.0	4.8	8.0
(billion kilowatt-hours)			
1985	316.3	91.0	407.3

Sources: Official Chinese data (de007s.r6d, de).

Hydropower accounts for a significant portion (22.3 percent in 1985) of China's electric power generation, but has grown more slowly than thermal power in the past two years. Growth in hydropower generation was rapid through 1983, but slowed to .4 percent in 1984, followed by growth of 4.8 percent for 1985. The 1984 slowdown in hydropower output was partially due to irregular rainfall patterns in many parts of the country, including serious drought in parts of North China, making analysis of overall trends difficult. Additionally, investment in hydropower has grown much more slowly than investment in thermal plants in recent years (20.1 percent from 1980 to 1983, as opposed to 31.4 percent for thermal), while investment in transmission facilities is growing at an even slower rate (3.2 percent from 1980 to 1983).

POLICY

Major policy revisions in the energy sector in late 1985 and early 1986 have resulted in a decline in oil exports, postponement of very large projects such as the Three Gorges Dam, and redirection of China's commercial nuclear industry away from reliance on Western technology imports.

The six month decline in oil prices from 27 dollars per barrel to levels in the 15 to 18 dollar per-barrel range between late 1985 and early 1986 has severely cut foreign exchange earnings from crude sales, China's major export. For every price cut of one dollar per barrel, China (at late 1985 and early 1986 export levels) loses 200 million dollars. While it appeared in late 1985 that China was pursuing a policy of increasing the volume of crude exports to compensate for falling revenues, the China National Chemicals Import and Export Corporation announced in February that China would not increase crude exports over 1985 levels. In fact, exports have been declining this year. For export levels and growth rates of petroleum export volume, value, and average prices, see table 4-9 below.

Zheng Dunxun, president of the China National Chemicals Import and Export Corporation, has stated that the oil not exported would be used domestically. This policy is consistent with reports that most Chinese refineries have been operating at only 60-70 percent of capacity. In addition, recent imports of refining technology indicate that this area is receiving increased investment. In light of the demonstrated domestic energy shortage it seems likely that this policy of domestic use will continue as long as world oil prices remain depressed.

Table 4-9
CHINESE OIL EXPORTS, 1981-85

	Volume			Dollar Value			Price Change	
	Crude Pet-roleum	Refined Pet-roleum	Total Oil	Crude Pet-roleum	Refined Pet-roleum	Total Oil	Crude Pet-roleum	Refined Pet-roleum
1981 Level *	13,870	4,670	18,540	3,268	1,376	4,644	236	295
(percent growth)								
1982 I	28.4	35.9	30.3	21.8	30.9	24.5	-5.1	-3.8
II	15.1	4.6	12.6	9.9	-.1	7.0	-4.7	-4.5
III	-3.8	-13.0	-6.2	-11.0	-15.9	-12.5	-7.3	-3.1
IV	-7.4	3.1	-4.8	-13.4	-.6	-9.7	-6.2	-3.6
Average	5.8	5.1	5.7	-.4	1.2	.0	-5.9	-3.7
1983 I	-9.4	-9.6	-9.5	-18.7	-16.1	-17.9	-10.3	-7.1
II	-11.9	15.8	-5.6	-24.3	9.4	-15.2	-14.0	-5.4
III	22.8	6.7	18.9	10.9	8.6	10.2	-9.7	1.8
IV	1.6	-10.6	-1.6	-13.0	-21.3	-15.7	-14.6	-11.9
Average	1.0	.0	.7	-11.4	-5.8	-9.7	-12.2	-6.0
1984 I	35.2	13.3	29.3	27.3	5.6	20.2	-5.5	-6.5
II	63.5	13.6	49.6	51.8	2.0	34.6	-7.3	-10.3
III	23.1	21.1	22.7	3.4	-5.1	1.0	-16.4	-21.7
IV	77.6	16.1	62.7	54.6	-6.0	36.5	-13.0	-19.0
Average	48.5	16.1	40.4	32.2	-1.0	21.8	-11.3	-14.6
1985 I	56.1	18.0	47.1	51.0	10.8	39.5	-3.7	-6.1
II	30.9	.0	24.4	30.3	-2.0	21.8	-.6	-2.1
III	32.5	-5.8	24.3	36.4	-5.0	25.1	3.1	.9
IV	32.1	27.7	31.4	32.3	45.0	34.9	.0	13.4
Average	36.4	8.9	30.8	36.6	10.6	30.0	.0	1.3
1985 Level*	30,030	6,210	36,240	5,206	1,436	6,643	173	231
1986 I	-10.8	-27.1	-13.9	N/A	N/A	N/A	N/A	N/A
1986'I Level*	5,779	1,101	6,881	N/A	N/A	N/A	N/A	N/A

Sources: Various issues of Chinese Customs Statistics. 1986'I figures from **China Economic News** (5/5/86).

* Levels are in 1,000 tons for volume, million dollars for value, and dollars per ton for unit value.

A further policy development has been an increased willingness to delay very large projects such as the Three Gorges Hydroelectric project. The projects which have been placed on hold generally are those which would have required large amounts of foreign exchange for imported materials or expertise. It appears that for the time-being, national policy-makers prefer smaller, domestically viable projects.

The Sunan nuclear station in Jiangsu Province is one such project which has been postponed. Originally meant to be China's second commercial nuclear plant providing power for domestic consumption (after the Qinshan plant and Daya Bay, which will provide power for Hong Kong), Sunan was to be built using largely imported equipment. Framatome, a French company, and Germany's Kraftwerk Union were negotiating for a contract to supply two 1,000 megawatt reactors for the plant. Neither company will receive the contract, however, because the Sunan plant has been postponed indefinitely. In a major policy speech in April, Vice Premier Li Peng announced that nuclear power had been relegated to a supplementary role in China's energy sector, and that China will rely on domestic technology for development of its nuclear industry. Li also announced that a mission would be sent to the Soviet Union to study nuclear power technology in that country.

These new policy directions dovetail with existing policies which give priority to increasing energy output and rationalizing consumption patterns through both direct and indirect government steps. Direct measures have centered around investment allocations and a well-developed price reform program, especially in the coal industry. Indirect measures include the general urban industrial reforms. These general reforms have substituted net earnings incentives for physical output targets, prompting energy conservation even in advance of price reforms.

Energy has continued to be a high priority in State investment policy. State capital construction investment in the energy industry reached 20.1 billion yuan in the first half of 1985, 21 percent higher than 1984. Investment in energy continues to make up the bulk of state capital construction in industry: 49 percent in 1984, but down slightly for 1985 to 43.4 percent.

In the coal industry, a combination of price and management reforms has been introduced to rationalize supply and consumption through market forces. The reforms have already brought out dislocation problems which will have to be solved not only for coal, but for the economy as a whole if the use of financial incentives is to succeed.

Price reform has dramatically altered the way coal is distributed and consumed. Just as for earlier reforms in agriculture, coal industry reforms were first experimented with at select coal mines. In 1983, a trial program was introduced in 22 mining administrations in China's eastern region to allow higher prices for coal production in excess of quotas. In addition, mines were allowed to sell above-quota coal to whomever they wished. Individual end-users, both state and local, were charged higher prices for deliveries over their standard orders. The ingenuity of the system is in its influence over decisions at the margin. It affects decisions about additional output and increased consumption without ruining the financial positions of subsidized state enterprises.

As part of the price reform program, wider variations in coal prices will be implemented to reflect different grades of coal. Industrial users are already beginning to pay higher prices. According to official announcements, the price of coal is being raised to encourage conservation and more efficient use. Thus, goes the official argument, higher coal prices should not result in higher prices for final products. The price of coal for household consumption is expected to remain stable, due to continued government subsidies meant to cushion politically unstable urban areas from the impact of price reform on living standards.

The management aspects of the experimental reforms include greater freedom given to coal mines, power companies, chemical plants, and other end-users to form joint ventures and compensatory ventures to coordinate production, transportation, and marketing. By late 1984, however, problems developed in supplying standing-order customers. It seems that the profit incentive and the return on new cooperative ventures caused coal to be diverted from traditional customers with standing orders to affiliates and other customers willing to pay higher prices.

The increasing responsiveness of industrial producers to macroeconomic control measures such as financial contractions has significantly affected energy output in late 1985 and early 1986. The steep decline in energy output registered in the first quarter of this year was more a result of lower state budget outlays for subsidies and tighter restrictions on previously generous credit than an indication of underlying structural or technological failings in the energy industry. Especially affected were the smaller local mines which are locally financed and depend in large measure on local credit and bank loans.

A further policy initiative in the coal industry is aimed at dealing with the isolation problem. Since most of China's coal is in Shanxi and the west, transport was seen as the only answer to the energy shortage on the east coast. As of mid-1985, the Coal Ministry had begun giving high priority to developing coal reserves in eastern China, with 21.7 percent of state mine development investments in 1985 allocated for that region. Coal reserves in east China are mostly in Shandong and Anhui provinces and are estimated by the Chinese at over 44 billion tons (5.9 percent of total Chinese reserves), not as plentiful as in western China, but of good quality.

In the petroleum industry, just as for coal, policy has focused on increasing output and rationalizing use. For petroleum, this has meant shifting discovery and development efforts to onshore fields, both new and existing. New technologies such as steam injection and the use of advanced drilling muds have improved the recovery rate of many older fields such as the Daqing field. Xinjiang's Qaidam basin, the Ordos basin in Inner Mongolia, and the Sichuan basin are all areas of interest for Western companies which have not been able to gain access to currently producing fields in the northeast. Although there have been a few good finds offshore, the results have been disappointing enough to make negotiations on a second set of drilling contracts more difficult for the Chinese. Rationalization of petroleum use, in addition to more traditional conservation efforts, has emphasized conversion of oil-burning facilities to coal-burning ones, primarily to make petroleum available for export.

One measure of the direct effort to produce more oil onshore is the emphasis on investment in technical updating and transformation in the petroleum industry. The oil industry received 15 percent of all such investment allocations in the early 1980's, more than double the level of technical transformation investment in the coal industry. From 1981 to 1983, technical transformation investment in oil grew at over 35 percent a year, much faster than for other industrial sectors.

Within China, the government has sought to restrain domestic use of oil in order to increase the amount available for export. In addition to encouraging consumption restraint, the government has pursued a policy designed to switch power generation and other industrial uses from oil to coal-fired boilers. The success of this policy is indicated by the relatively small increase (2.5 percent in 1984) in oil consumption, as compared to growth in oil output of 8.1 percent in the same year, and growth in coal consumption of 9.8 percent. As illustrated in Table 4-5, most of the increase in stocks and net energy exports for 1984 is from oil consumption restraint. This trend continued through 1985, with crude oil export volume growing by 36.4 percent, far outstripping output growth of 8.9 percent.

PROBLEMS

In spite of rapid growth in recent years and good prospects for energy output growth in the near future, China's most serious energy problems remain the low level technical sophistication in primary production and secondary conversion of energy, extreme isolation of many of the best energy fields from major consumers in industrial centers, chronic shortages in both urban and rural areas, and a serious weakening in the international oil market on which China depends for a significant share of its foreign exchange earnings.

The low level of technical sophistication will be perhaps the most difficult for China to overcome without large expenditures of foreign exchange for design, equipment, and training from Japan and the West. The problem is most obvious and celebrated in the case of nuclear energy, but given the overwhelming importance of coal and petroleum in China's energy plans, the low technical level in these sectors is more critical. The coal and oil industries must modernize all aspects of energy extraction and conversion, not only to increase output, but also to improve health and safety conditions, which are particularly poor in China's many local mines.

Although energy output is growing most rapidly where demand for energy is highest, China's industrialization could proceed much faster and more economically if energy transport and transmission growth were as impressive as gains in output. Energy production in China's southern regions is very poor relative to needs, while the situation is just the reverse in the isolated North and Northwest. Roughly two-thirds of end-19[illegible]s 780 billion tons of proven reserves are in provinces in the north and northeast. High quality coal reserves are isolated, and transportation systems have been slow to develop.

For oil, the natural shortage of petroleum in the south and east accentuates regional disparities in total commercial energy availability. Although coal can be used in some applications in place of petroleum products, it is not as convenient as oil, and in many applications, substitution of coal is not possible. For hydro-electric power, regional differences are just as marked, with very little hydropower generated in the north and on the east coast, where industrial needs are the greatest.

Shortages in cities and some rural areas continue to be a major problem for the energy sector in spite of recent rapid growth in energy output. China's Ministry of Water Resources and Electric Power estimated the power shortage last year to be between 45 and 50 billion kilowatt-hours (roughly 12.5 percent of current output), an increase over previous years. According to recent reports, commercial energy supply in rural areas meets only 50-60 percent of demand. Given short supplies of commercial energy sources, rural dwellers resort to straw, firewood, and other natural sources for most (69 percent) of their energy needs. Commercial sources satisfy about a quarter of energy needs. (The corresponding figure for small towns is 43 percent.)

The electric power shortage is especially critical in urban areas. According to Chinese survey results, 30 percent of industrial capacity goes unused at any given time because of electric power shortages and sharing procedures. Sections of cities go without power on a regularly scheduled basis. Large scale projects, such as the Baoshan steel complex, have had to be delayed or scaled back due to insufficient power supply capability.

For Chinese energy exports, low world energy prices remain the biggest problem, affecting foreign earnings and direct foreign investment. For exports of onshore oil, low world oil prices mostly affect the Northeast, China's main source of crude for export. For regions without oil or access to the foreign exchange it earns, lower world oil prices are likely to stimulate economic growth, as petroleum which would have been exported is diverted to the domestic market and imports of refined petroleum products increase. The world oil glut has seriously weakened China's ability to induce foreign investment in offshore fields. A decline in world coal prices from a high of $50 a ton in 1982 to the present level of $40 a ton has detracted from investors' interest, although China could profit from lower equipment prices.

PROSPECTS

While prospects for China's energy output growth and energy conservation are good in the short and intermediate future, unsophisticated technology could reduce the long-term potential for output growth and increased efficiency in conservation and use. The well-known Chinese goal of doubling 1980 energy output by the year 2000 is feasible, and possibly conservative, but will require the added productivity of Japanese and Western technologies. The extreme inefficiency of energy use illustrated in Table 4-7 shows great potential for savings. However, consumption savings will have to be close to 7 percent a year if output is to quadruple during the same 20-year period, as planned.

The strong growth in energy output since recovery from the 1980-81 recession is shown again in Table 4-10, below, in comparison to the growth rates required to meet Chinese energy output targets for 1990 and the year 2000. For coal and oil, historic growth rates have been significantly higher than the annual growth of 3.3 percent for coal and 3.7 percent for oil required to reach the 1990 target (one billion tons of coal and 200 million tons of oil).

Table 4-10
ENERGY OUTPUT AND GROWTH TARGETS, 1980-2000

	Coal	Crude Oil	Natural Gas	Electricity
(Actual growth rates)				
1980	-2.4	-.2	-1.7	6.6
1981	.3	-4.5	-10.7	2.9
1982	7.2	.9	-6.3	6.0
1983	7.2	3.9	2.3	7.2
1984	10.4	8.1	1.8	7.3
1985	7.8	8.9	3.5	8.0
(Target growth rates)				
1985-1990	3.3	3.7	5.2	6.2
1991-2000	2.2	3.5	5.6	8.1
1985-2000	2.5	3.6	5.5	7.5
(Physical output and targets*)				
1980 Level	620	106	14	301
1985 Level	850	125	13	407
1990 Target	1,000	150	17	550
2000 Target	1,200	210	30	1,200

SOURCE: Official data and projections. 1990 gas target from **China Daily** 1/23/86, p. 2. (J5C003s.R6D).

NOTES: Growth rates shown for 1990 and 2000 are the annual rates required to meet official targets, based on 1985 output levels.

* Physical output and targets are in million tons for coal and oil, billion cubic meters for gas, and billion kilowatt-hours for electric power.

China's long-term goal of doubling coal output to 1.2 billion tons by the year 2000 is therefore conservative, given present growth rates, investment levels, and China's rich reserves. China produced 620 million tons of coal in 1980. To double that amount by the year 2000 would have required growth of 3.5 percent a year. Since actual growth has averaged slightly over 7 percent per annum from 1980 to 1985, doubling by 2000 will require annual growth of only 2.5 percent for the next fifteen years.

The combination of China's high absorptive capacity for technology transfer and the on-going managerial and incentive reforms are the main reasons for general optimism in the face of current energy shortages. This optimism represents a shift from generally held views on China's energy situation in 1980-81.

Short-term efforts to increase coal production will center on continued exploitation by the small, local mines which have been responsible for much of the recent growth in output. Long-term growth will come from large-scale open pit mines, to be exploited with foreign technological assistance. One example is the Occidental-Pingshuo coal joint venture agreement, completion of which augurs well for China's long term prospects of expanding coal production. The mine is to go into full operation sometime after September 1987, with projected annual capacity of 15.3 million tons.

With only spotty offshore drilling results, foreign oil companies will press for both better terms and greater access to onshore oil. The Chinese are more likely to grant such access, now that prospects for using offshore oil funds to pay for onshore exploitation have dimmed. Several foreign companies are already engaged in onshore surveying, but on a service contract basis, with eventual production sharing unlikely. Experts say the Chinese are most likely to initially offer only high-risk ventures the possibility of production sharing.

China has better prospects for expansion of the onshore oil industry. As with coal, the Chinese target of doubling output by the year 2000 to 200 million tons per year is probably conservative. Output in 1985 was 125 million tons. Given these growth rates, doubling by 2000 requires an annual growth rate of 3.6 percent. This should be possible even with poor offshore oil results.

The Chinese plan to quadruple electric power generation to 1.2 trillion kilowatt-hours by the year 2000, from 300 million kwh in 1980. By 1990, power output is to reach 550 million kilowatt-hours. However, Zhao Qinfu, deputy minister of Water Resources and Electric Power, has called for over achievement of the official target, to 600 million kilowatt-hours by the end of the decade.

Achieving these levels of power generation will require higher investment levels and faster growth rates than attained in the 1980-85 period. According to Chinese projections, power generation targets will require additions to capacity averaging ten million kilowatts per year for the next 15 years. In contrast, power-generating capacity added in the last five years has averaged 3.3 million kwh per year. To reach the goal of quadrupling by 2000, electric power generation must grow at an annual average rate of 7.5 percent, higher than the 6.2 percent average from 1980 through 1985, but consistent with the higher growth rates of the last several years (see Table 4-8). The 1990 target indicates slower growth from 1986 to 1990 (6.5 percent per year), and then faster growth of 8.1 percent per year until 2000.

According to Chinese projections, nuclear plants will provide 5 percent of China's electricity needs by the year 2000, with total generating capacity of 10,000 megawatts. With the postponement of the Sunan power plant, this may be an optimistic target. In any case, the Chinese regard nuclear power as a third-priority supplement to the already high levels of investment being made in high power lines for transmitting hydro and thermal electricity from the inland to industrial centers along the coast, and investment in coastal thermal power plants with railroads and ports to supply them with coal.

In spite of the high visibility of nuclear and offshore ventures, the strongest prospects for technology transfer are in the onshore oil and coal industries. Chinese demand for mining, drilling, refining, transmission, and other energy-related technologies is growing. For these reasons, China's coal industry is becoming more outward-oriented. Recent organizational changes at the China National Import & Export Corporation (CNIEC) and China National Coal Development Corporation (CNCDC) are geared to increasing economic and technical cooperation, according to a CNIEC official. In other words, these changes are meant to orient China's coal industry toward more joint energy ventures, technology imports, and coal exports. The dozen or so joint ventures now underway in the coal industry illustrate this outward orientation.

Coal exports are therefore also a major part of China's long-term energy development strategy, and also an important part of the agreements anticipated with foreign investors. Joint ventures increasingly involve production sharing (9.4 of the 11.9 million tons of washed coal expected to come out of the Occidental-Pingshuo mine are to be exported) and de-regulation in the coal industry. Shanxi province, China's biggest coal producer, was given the go-ahead to export 600,000 tons of coal in 1985, the first time Shanxi has exported coal directly. Provincial officials have stated that the income from direct coal exports will be spent on equipment and technology imports.

For the near future, despite strong growth in the first quarter of 1986, coal exports will not share the dramatic position in China's balance of payments now held by petroleum. By the middle or late 1990s, however, China could supplant traditional coal suppliers in large markets like Japan.

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CHAPTER FIVE — Investment and Capital Construction

EXECUTIVE SUMMARY

TRENDS
- * Investment has grown rapidly in the first quarter following an officially induced slowdown in late 1985.
- * Non-budget investment has grown rapidly.
- * Investment as a source of growth continues to be supplemented by increases in the productivity of capital.

POLICY
- * Investment controls have developed into one of the major economic levers used by the government to control China's macroeconomy.
- * Investment within the state plan will be directed toward technical transformation projects in the industrial sector, and capital construction in the energy and transport sectors.
- * The pace of investment growth will be slowed.

PROBLEMS
- * The traditional problems of overheated investment and incorrect incentives remain.
- * Relatively arbitrary across-the-board cutbacks have made it difficult to discriminate between projects deserving funds and those which do not.

PROSPECTS
- * Short-term (1986) investment levels should be lower than those of 1984 and 1985.
- * State investment in bottleneck sectors, especially energy and transport, will increase.
- * Non-state investment will increase in sophistication and quantity.

TRENDS

In quantitative terms, China's investment trends showed rapid growth through the middle of 1985, an officially-induced slowdown in the second half of the year, and a recovery in the pace of investment in early 1986. In more descriptive terms, Chinese policy-makers, unlike their counterparts in traditional communist economies, have increasingly stressed quality rather than quantity in making investment decisions by focusing on technical transformation rather than construction of new plants. A third major trend influencing China's investment patterns is the continued shift away from dependence on the state budget as a primary source of investment funds, instead relying increasingly on borrowed funds and funds generated from enterprise profits. These are the most general and significant characteristic of recent investment and capital construction trends.

A fourth important trend in the second half of 1985 brought attempts by the central government to reduce inflationary investment levels by reducing state outlays for capital construction and restricting loan funds, policies which resulted in a contraction in industrial output during late autumn and early winter (see Chapter 3 on industry). Finally, investment as a source of overall economic growth continued to be supplemented by the increased productivity of capital, largely as a result of the increased labor intensity of the economy and general increases in efficiency of capacity utilization.

These trends have been most apparent in recent statistics reflecting the decentralization of investment financing, the emphasis on technical renovation rather than construction of new plants, the introduction and strengthening of "responsibility systems" in the construction industry itself, and the increased importance of imported equipment and machinery. For enterprise management, the greater role given to competition, profit incentives, and enterprise management independence have also been important. In general, the improved quality of investment has been as important a contributor to the strong growth as the high level of investment itself.

Table 5-1
INVESTMENT AND SOURCES OF GROWTH
(Percent)

	NMP Investment (Savings) Rate	Real NMP Growth	Growth due to Investment	Growth due to Other factors
1975	33.9	8.3	7.9	.4
1976	30.9	-2.7	8.4	-11.1
1977	32.3	7.8	6.8	1.0
1978	36.5	12.3	7.2	5.1
1979	34.6	7.0	8.5	-1.5
1980	31.6	6.4	8.0	-1.6
1981	28.5	4.9	7.2	-2.3
1982	28.8	8.3	6.3	2.0
1983	29.7	9.8	6.6	3.2
1984	31.2	13.9	6.9	7.0
1985	33.4	12.3	7.6	4.6

SOURCES: Official data and RCR calculations (J5CBM51t.R5I).

The importance of both investment growth and investment quality can be seen in Table 5-1, above, which shows the increased share of national income committed to investment as well as the growth in the productivity of both investment goods and the national capital stock in general. The percent savings rate shown in Table 5-1 indicates how much of total output was in the form of investment goods rather than consumer goods (and hence, from the consumer's point of view, corresponded to money saved rather than money spent on consumption). Another term for this national savings rate, therefore, is the national investment rate. It is clear that the savings rate has grown steadily through 1985, following the state budget contraction of 1980-81. The increasing investment shares mean that investment is growing even faster than national income (NMP).

This rapid growth of investment is itself a strong source of overall economic growth. Table 5-1 shows that for 1985, 7.6 percent of the total 12.3 percent growth in the economy was due to the increase in capital stock brought about by investment. The rest of the growth, roughly 4.6 percent, was due to "other" factors which contributed to an increase in the average productivity of all China's capital stock. Together, these two components, increased importance of investment growth and quality improvements for China's overall economic expansion.

The increased average productivity of China's capital stock is caused by a number of factors, some of them technical and some of them related to policy. In a technical sense, because China is investing in improvements to existing capacity, small investments have often had a major influence on the productivity of large plants. In a second technical sense, many investments have increased the labor intensity of production, adding to the productivity of the capital associated with the larger labor force. Finally, in a policy sense, the farm and enterprise reforms have replaced physical output quotas with profit incentives, stimulating efficiencies in the acquisition and use of both raw materials and capital.

One important example of China's use and acquisition of capital is the surge in imports during 1985. China's 1985 imports were dominated by metals and producer goods, indicating that China is spending foreign exchange for capital goods as opposed to consumer imports. In spite of large trade deficits, imports in these two critical investment goods sectors have grown without interruption. Given low technology levels, the rapid increase in the importation of investment goods has made a major contribution to the improved quality of the overall capital stock and to its increased productivity documented above.

Table 5-2
STATE CAPITAL CONSTRUCTION INVESTMENT BY SECTOR, 1980-85

Type	1980	1981	1982	1983	1984	1985	1985
		(percent growth)					(Bil Yuan)
Total	6.8	-20.8	25.4	7.0	25.1	42.8	106.10
Industry Total	7.3	-21.6	20.6	15.3	21.0	29.2	46.34
Light Industry	66.3	-14.8	7.1	-17.9	9.5	7.0	4.28
Heavy Industry	-.7	-23.2	24.1	22.5	22.8	32.0	42.07
Of Which: Energy	4.6	-20.7	11.1	24.6	30.1	21.1	20.10
Agriculture	-10.2	-43.9	16.8	25.6	4.7	19.5	5.52
Transport, Communication	-2.7	-35.1	41.4	36.4	48.9	51.5	17.57
Commerce & Foreign Trade	38.9	-2.0	28.4	-25.3	21.6	57.0	4.85
Other Departments	13.1	-7.9	29.7	-16.2	30.3	87.8	31.86
Of Which: Research, Culture,Ed,Hlth	32.3	-1.5	16.5	-27.7	32.6	-1.4	7.39

Sources: State Statistical Bureau, **1984 Statistical Yearbook**, pp. 306, 308; **China Economic News** 3/11/85, p. 6, 4/7/86, p. 7; State Statistical Bureau **Abstract**, 7/85, pp. 67-68. (J6BCK01S.N6F)

State budgets for 1984 and 1985 showed a renewed emphasis on investment, but the state investment pattern emphasizes heavy industry, transport, and "other" departments (perhaps with military significance). Table 5-2, above, shows the very low level of state investment in agriculture, light industry, and commerce. Investment in heavy industry, which includes investment in the critical energy sector, accounted for 42 of 106 billion yuan invested in 1985, while investment in the transport sector accounted for another 18 billion. Agriculture, by contrast, received only 5.5 billion in 1985 and light industry only 4.3 billion. Under the various industrial and urban reform programs, investment in light industry and agriculture is meant to be largely self-financed from enterprise and household earnings.

The overall historical pattern of investment ups and downs since 1980 is also given in Table 5-2, above. Most striking is 1981, when investment contracted throughout the economy. Less recognized is the much smaller investment slow-down in 1983, when light industry, agriculture, and, most significantly, "other" investment all contracted, reducing the overall investment growth rate from 25 percent to 7 percent. The 1983 slowdown is important because it shows a cyclical pattern which appears to have repeated itself again in 1985-86. Seasonally adjusted industrial output data for early 1986 indicate that industrial growth is recovering from its 1985 second-half slump, induced in part by an investment slowdown (see Chapter 3 on industry).

The general and more severe investment contraction in 1981 deserves comment because it represents an often misinterpreted phenomenon. Traditionally, Chinese officials have pointed to this "readjustment" as a deliberate policy to restructure the economy. In fact, the very large state budget deficits of 1979-80 forced drastic cutbacks in state expenditures focused primarily on state investment. The budget deficits, far from planned, seem to have resulted from a combination of war expenses related to the 1979 conflict with Vietnam, new heavy food subsidies in 1980, and in general very large investments from the mini-great leap of 1978-79. This same 1981 investment contraction was responsible for the fall in heavy industrial output that same year.

Just as investment levels have grown very rapidly since the slump in 1981, the sources of investment funding have undergone dramatic change. As part of China's effort to make enterprises more efficient and enterprise managers more accountable, banking reforms are shifting the source of investment funds from state budget allocations to bank loans requiring the payment of interest. (See chapter 6 for more on Banking and Finance.) Cooperatives and even state-owned enterprises are raising capital by selling bonds and quasi-securities. In 1985, non-state budget investment in fixed assets reached 116 billion yuan, a 60.5 percent increase over 1984. As a result, it accounted for over 70 percent of total investment. As an example of the steps taken to raise such funds, the city of Tianjin collected 300 million yuan of "social funding" from individuals and groups for investment in the building materials, metallurgy, chemical, machine-building, communications, textiles, commerce, and service industries. Even farmers in the region raised almost 8 million yuan for investment in 49 local businesses.

Monthly data for the second half of 1985 show a continuation of the trend towards independent sources of investment, although the statistical picture for the year overall may be exaggerated by the government's attempt to slow down the economy. Cutting back on state expenditures for capital construction may have temporarily reduced the state share in investment funding below the level it would have been without the artificially induced contraction.

Table 5-3
PLAN AND NON-PLAN CAPITAL CONSTRUCTION INVESTMENT IN 1984
(billion yuan)

Type		Total Investment	Status in State Plan	
			Plan	Non-Plan
Total Investment:		105.0	69.0	36.0
Budget Status:	Budget	47.9	31.6	16.3
	Non-Budget	57.1	37.4	19.7

SOURCES: Official State Statistical Bureau data (J5BY64T.T5G).

The increased sourcing of investment funds outside the state budget has meant that investments have also increasingly been outside the control of the state plan, a trend which has greatly irritated central policy-makers who feel that many non-plan investment decisions are of lower strategic value for the economy.

Diagram 5-1

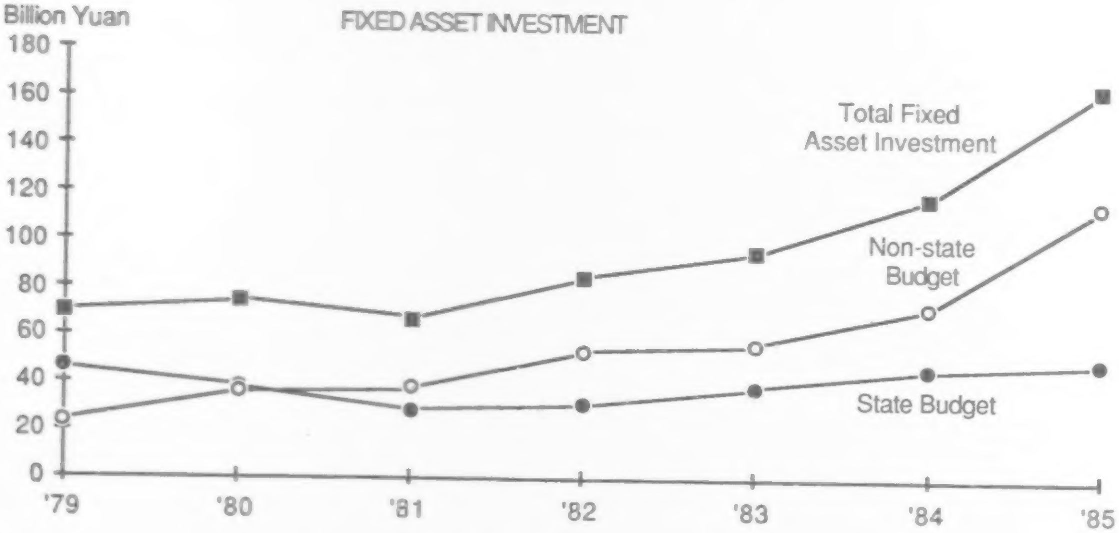


Table 5-3, above, shows the relationship between 1984 investments in the state budget and those controlled by the state plan; it is clear from the table that not all state budget funds are in the plan and many investments in the plan are funded from non-plan sources. In 1984 more than a third of all investment was outside the control of the state plan. Because of "excessive" investment "outside" the budget, many scarce and expensive materials were increasingly diverted from state to local projects. As a result, the state project completion rate fell from 24.4 percent in the first half of 1984 to 15.6 percent in the first half of 1985.

Table 5-4
SOURCES OF FUNDS INVESTED IN FIXED ASSETS BY STATE-OWNED UNITS 1978-1985

Year	Total Fixed Asset Investment				Capital Construction		Technical Transformation	
	Total State Fixed Asset Investment	State Budget	Non-State Budget	Non-State as % of Total	State Budget	Non-State Budget	State Budget	Non-State Budget
(Billion Yuan)								
1979	69.9	46.2	23.7	33.9	41.9	10.5	4.4	13.2
1980	74.6	38.2	36.4	48.8	34.9	21.0	3.3	15.4
1981	66.8	28.6	38.1	57.0	25.2	19.1	3.5	19.0
1982	84.5	31.0	53.6	63.4	27.7	27.9	3.3	25.7
1983	95.2	38.7	56.5	59.3	34.6	24.8	4.1	31.7
1984	118.5	46.2	72.3	61.0	40.4	33.9	5.8	38.4
1985	165.2	49.2*	116.0*	70.2*	41.4	64.7	7.7*	51.3*
(Percent Annual Growth)								
1980	6.7	-17.3	53.3		-16.6	99.8	-24.4	16.5
1981	-10.5	-25.1	4.8		-28.0	-8.7	5.8	23.2
1982	26.6	8.1	40.6		10.0	45.7	-5.5	35.4
1983	12.6	24.9	5.5		25.0	-10.9	23.9	23.4
1984	24.5	19.5	27.9		16.8	36.7	42.3	21.1
1985	39.4	6.4*	60.5*		2.6	90.8	33.7*	33.7*

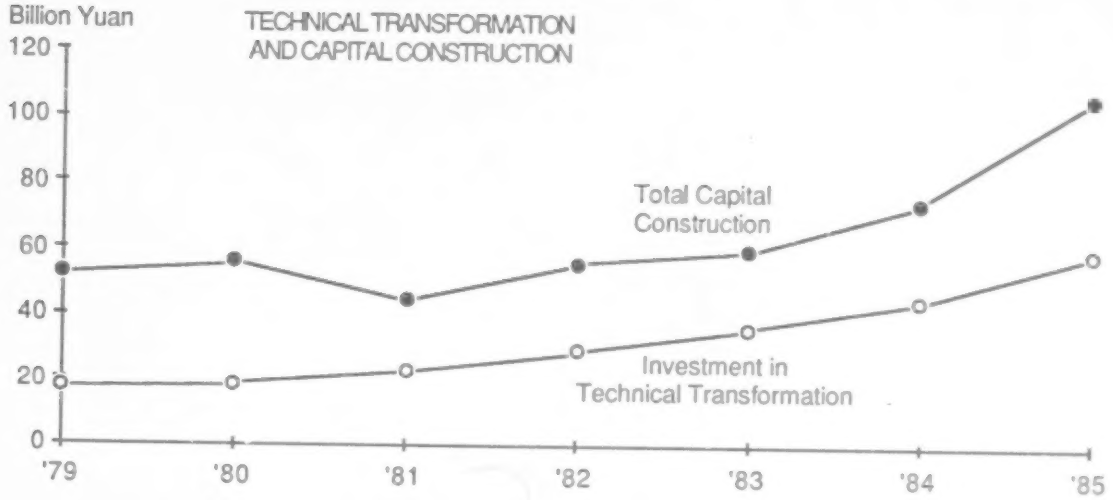
* Assumes that budget and non-budget technical transformation investment grew at the same average rate for both.

Sources: State Statistical Bureau, **1984 Statistical Yearbook**, pp. 303, 333; **1985 Statistical Yearbook**, p. 450; **Tongji**, No. 5, 5/86; (J6BCK03S.N6F).

This diversion of scarce construction materials, as well as rapid inflation in the price of many industrial products, led to efforts to contract overall investment in the second half of 1985. Monthly data show that there was a cut in state investment in August-September, a sharp but temporary cutback in loaned funds in October, but almost no change whatsoever in investment financed by funds generated internally by enterprises. The state was successful to a degree in slowing the economy by cutting investment, but the state's contractionary efforts were much weaker than in 1981, precisely because state budget investment funds are now a much smaller share of all investment funding.

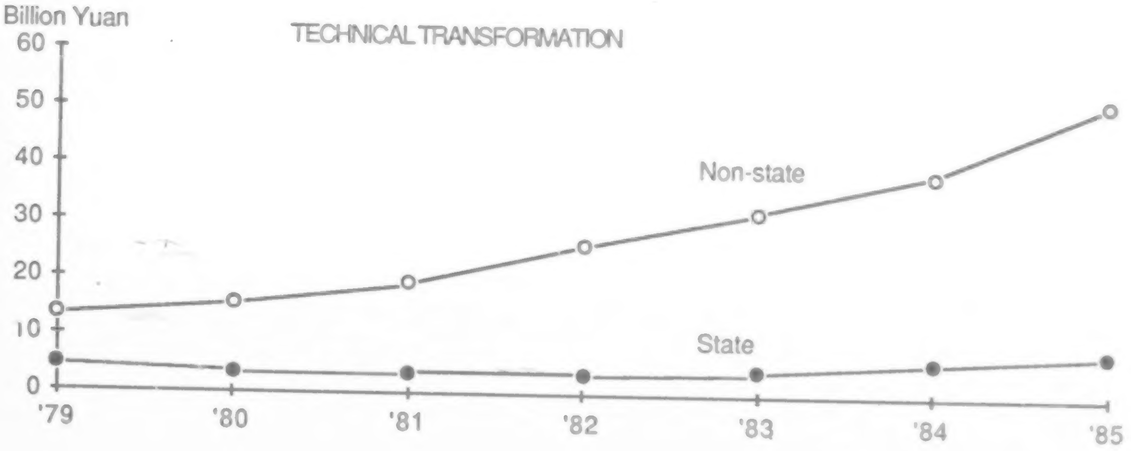
Two of China's major investment trends described above, improved investment quality and increased non-state funding, are combined in so-called "technical transformation investments," perhaps the single most significant element in China's evolving investment pattern. Table 5-4, above, presents available information on the share of technical transformation investment by state-owned enterprises. The statistics show that, unlike new capital construction, technical transformation investments have been largely financed from non-budget funds. The important conclusion to draw is that the financial decentralization of investment funding has enhanced increases in the efficiency and quality of investment.

Diagram 5-2



Emphasis on renovation rather than new plants is important because renovation doesn't need as much new land and requires less construction and fewer other civil works. Most Chinese projects split investment between construction of buildings, warehouses, roads, power lines, and other civil works on the one hand, and purchase of equipment and technical training services on the other. Technical renovation relies almost entirely on purchases of equipment and improvements in management and production methods, with construction and civil works playing a secondary role.

Diagram 5-3



Technical transformation has two key benefits of relevance to China's current situation: it saves on foreign exchange because it doesn't require whole plants (only core quality-related technology), and it introduces quality-product technology without unnecessary and expensive labor-saving technology. It also saves on building construction and other civil works investments. Given China's need to cut back on construction costs, technical upgrading is a viable partial solution to generally high overall investment requirements.

Table 5-5
STATE AND COLLECTIVE INVESTMENT IN 20 KEY CITIES, 1984
(Billion Yuan)

City	Total State and Collective Investment	Total State Investment	State Investment as share of Total (%)	Technical Updating by State	Technical Updating as share of Total (%)	Total Investment in Residence	Investment in Residences Per Capita
Shanghai	8.91	7.00	78.6	2.26	32.3	.82	68.1
Peking	7.47	5.28	70.7	1.53	29.0	1.02	108.2
Tianjin	6.41	3.41	53.2	1.21	35.5	.71	89.0
Guangzhou	3.22	2.52	78.4	.85	33.8	.61	86.7
Shenyang	2.27	1.28	56.4	.48	37.2	.40	76.0
Nanjing	2.15	1.21	56.4	.31	25.8	.23	49.9
Wuhan	2.06	1.36	65.7	.59	43.7	.29	48.7
Chongqing	1.95	1.27	65.2	.52	40.6	.06	4.4
Dalian	1.83	1.08	59.0	.41	38.3	.22	46.2
Taiyuan	1.67	1.26	75.4	.36	28.1	.24	19.4
Chengdu	1.38	1.00	72.0	.36	35.9	.22	25.7
Qingdao	1.38	.57	41.2	.35	62.0	.15	23.8
Xian	1.28	1.03	80.7	.32	31.5	.23	42.0
Kunming	1.23	.74	59.8	.27	36.9	.16	50.5
Harbin	1.23	.93	75.3	.30	32.4	.24	63.7
Anshan	1.04	.74	70.4	.54	73.7	.14	52.5
Lanzhou	1.04	.84	80.6	.30	36.2	.16	67.8
Changchun	1.02	.62	61.1	.14	23.2	.20	34.2
Jinan	.97	.48	49.4	.21	43.6	.12	34.2
Fushun	.76	.50	65.4	.24	48.6	.11	52.6

Source: State Statistical Bureau, **1985 Statistical Yearbook**, pp. 53-181; (J6BCK02S.N6F)

The widespread importance of technical upgrading, as well as the regional variation in housing investments, are clear from data on twenty key cities presented in Table 5-5, above. First, the statistics confirm that for virtually all cities the state-owned units receive the large majority of investment goods. Second, the data show that technical transformation is a major component of the investment of every city, ranging from roughly one-quarter to three-quarters of the total, with more than half of the cities dedicating at least 35 percent of all investment to that use.

Finally, the very great variation in housing investment levels, especially when measured on a per capita basis, reveals the political nature of urban housing, in a double sense. In the first place, in Peking and Tianjin, where political elements are strongest, urban housing has clearly been given the highest priority. On the other end of the political spectrum, Guangzhou, perhaps the most independent of the large cities, has the next largest commitment to housing. This may be related to the number of foreign businesses resident in each location. In any event, the variation is conspicuous and is just one example of the regional diversity which is so much a part of China's current economic evolution.

In general, the rapid growth in non-productive investment reflects the historically chronic neglect of housing during the Maoist period, a neglect which the more decentralized and market-oriented investment process is moving quickly to correct.Non-productive investment -- that is, investment in housing, hotels, meeting halls, and similar types of buildings that do not yield a measurable output in physical commodities -- was postponed in late 1985 in some parts of China, most notably in Peking and Tianjin, in response to a central government call for an overall investment slowdown. As a portion of total investment, non-productive investment fell from 43 percent in 1981 to 40 percent in 1984. In 1985, non-productive investment dipped during the second half of the year but increased sharply in December, making up 45.7 percent of total investment in 1985.

POLICY

The most important policy directions in 1985-86, reflected in the Seventh Five Year Plan (1986-90), are the emphasis on technical renovation and the continued change in funding sources for fixed asset investment, particularly capital construction. Investment within the plan will emphasize technical transformation and renovation, will continue to stress investment in the critical energy sector as well as the transport sector, and will de-emphasize agriculture and light industry, which are expected to be largely self-financed from enterprise and household earnings. Additional policy priorities are the slowing of the overall pace of investment and the improvement of the quality and completion speed of construction projects.

To slow the high rate of capital construction investment, central and local authorities have instituted various measures, including a construction responsibility system, a nationwide review of the rate of completion of capital construction projects, and the institution of a system of priorities for completion of projects already undertaken. In spite of these efforts, capital construction investment has continued to grow rapidly, and state finance officials have indicated that it may take up to two years to bring the level of investment in line with the growth of the national economy.

The State Council announced in early September, 1985 that investment in capital construction throughout China will be restricted to the level assigned by the State, without exceptions. Banks were instructed to stop lending for projects not in the State plan and, in a move to control out-of-budget capital construction investment, the State Council also stipulated that self-generated investment funds deposited with the Construction Bank after June 30 could not be used for capital construction projects in 1985. In addition, banks were encouraged to use feasibility studies to judge the credit-worthiness of new projects. For example, the China Investment Bank, which has responsibility for construction funds and investments and credits from abroad, has formally instituted World Bank-style project appraisal methods.

Authorities have also announced that certain types of construction now underway will be given priority for completion. Peking municipality has indicated that housing, hospitals, schools, buildings for foreign affairs departments, and joint-venture projects with foreign funds for which contracts have been signed will be targeted for completion first. Construction of office buildings, exhibition halls, and auditoria will be suspended. In the second half of 1985, Tianjin municipality postponed construction of hotels and guest houses that were not urgently needed and concentrated on completing housing and urban utility projects instead.

A construction and investment responsibility system has been implemented in the State's effort to improve the quality of construction, shorten completion times, and make bankers and managers accountable for the investment in construction. In 1985, 169 contracts for key projects were awarded on the basis of "properly organized construction schedules," and 120 of these (71 percent) adopted the investment responsibility system. Of more than 140,000 projects under construction by state construction enterprises, 110,000 (79 percent) adopted various forms of the contract responsibility system.

Construction bureaus have been told to adopt open bidding systems to cut costs and improve delivery and completion times. During the first three quarters of 1985, state construction enterprises bid for more than 4,600 residential construction projects covering a construction area of 12 million square meters, more than 10 percent of the total construction area. The cost of these projects was approximately six percent lower than budgetary estimates, and construction times were shortened by an average of 20 percent.

To improve construction project completion rates and to alleviate the shortage of building materials, the State has ordered a nationwide check on the speed of construction. Peking and Tianjin have already reduced municipally-controlled capital investment.

Finally, the Seventh Five-Year Plan (1986-90) explicitly aims to "shift the emphasis of development to the technical transformation, renovation, and expansion of existing enterprises, and have them expand reproduction chiefly through intensive means." Furthermore, technical renovation will be emphasized in old industrial cities and bases, such as Shanghai, Tianjin, Shenyang, and Dalian. Under the Seventh Five Year Plan, investment in technical transformation will constitute 30.8 percent of total fixed assets investment, compared to 27.9% of the total during the Sixth Five Year Plan. Total investment in technical transformation and renewal for state enterprises and institutions will total 276 billion yuan during the Seventh Five Year Plan period, an 87 percent increase over investment during the Sixth Five Year Plan period.

PROBLEMS

In addition to traditional problems of overheated investment and irrational prices giving incorrect investment incentives, the experience of 1985-86 has revealed an additional contradiction in the efforts to control for these shortcomings. The standard policy move to control investment is across-the-board cut-backs for certain categories. But these relatively arbitrary cuts have not been able to discriminate between investments deserving encouragement and others which do not. In short, the effort to choose investments well, already made difficult by the absence of a more rational price system, has been further frustrated by the efforts to control the overall level of investment.

As indicated in earlier sections, over-ambitious capital construction investment, due mainly to the great increase in locally-financed or out-of-budget projects, is one of the most serious problems facing China's economic planners this year. The construction boom itself is causing serious problems in other areas of the economy as well. The main cause for concern over growing out-of-budget investment arises from the fact that much of it is undertaken without regard to state economic plans or market demand for the products that will be produced by the new projects. Another problem arises as more enterprises and local authorities undertake expansion and construction projects with the funds they have accumulated for investment; local and out-of-budget projects siphon critical building materials away from state projects. Already scarce resources are spread over a growing number of construction projects and the completion of state-planned projects lags behind schedule. The quality of construction projects has suffered, and construction materials have been wasted.

Local officials do not always investigate the market potential for the products of new factories that they are constructing with self-generated investment funds. A major reason is that prices before 1985 were fixed at high levels for many manufactured goods, reflecting Maoist policy which made them "luxury" goods that were sold to absorb excess purchasing power. These high prices, however, did not result from any large demand for such products, which were and still are often of marginal quality. So, current investment programs inspired by plans for profits from such "luxury" markets have poor prospects and have caused investment funds to be wasted and scarce building materials to be tied up in uncompleted or idle new factories. For example, one study showed that when all refrigerator and automobile manufacturing plants now under construction are completed, capacity will far exceed estimated long-term demand.

PROSPECTS

The prospects for investment in China point to slower investment growth in 1986, although the growth will still be quite high by international standards. It is interesting that this slow-down will be brought about in part through indirect measures, especially higher interest rates, credit restrictions, and price adjustments for critical bottleneck materials as well as for final goods. Sources of investment funds will show two quite separate trends. One trend is resurgent state budget participation in investment funding, concentrating on major bottleneck heavy industrial sectors. The other is a growing sophistication of investment funded by private borrowing and the use of retained earnings. Future investment should lead to growth not only from new productive capacity, but also from the enhanced productivity of existing assets, as more labor-intensive methods and better management make better use of plant and equipment. Finally, the serious shortage of modern technology and quality control suggest a strong and growing role for Western and Japanese capital goods. China appears to be husbanding its scarce foreign exchange for precisely this purpose.

The new 1986-90 five-year plan stresses that a slowdown in economic growth will occur gradually during 1986-87, but strong third-quarter 1985 signs of investment controls probably mean that investment growth in 1985 will be cut back significantly, although not nearly so severely as in 1981. According to the Seventh Five Year Plan, state capital construction investment will remain at about 1985 levels for 1986 and 1987. Given the target of average annual growth of 7 percent through 1990, this implies 12 percent annual growth in state capital construction from 1988 to 1990. Nevertheless, by international standards, China's share of capital accumulation in national income will remain very high at roughly 29 percent. This continued high rate of saving and investment, in turn, will be a major stimulus to overall economic growth.

In the past, fluctuations in non-budget and overall investment have been brought about by relatively direct administrative controls over funds and their use. With the urban industrial and banking reforms in place since 1984, central authorities will have to learn to use more indirect measures, and one of the likely candidates is the interest rate. Higher interest rates for bank loans and deposits will have a dual effect, rationing investment funds to the more profitable projects and attracting enterprise funds for deposit which might otherwise be used for less optimal projects. In addition, higher domestic interest rates will make borrowing from foreign banks a more attractive option for domestic enterprises. In this case, a guarantee of foreign exchange available for repayment will become the deciding factor for many prospective loans. The attractiveness of foreign interest rates, however, will also be affected by movements in China's foreign currency exchange rate.

If Chinese borrowers anticipate devaluations to match China's inflation relative to world price changes, they will see that foreign interest rates are higher than they in fact appear. This is because loans will be denominated in dollars or yen, and a devaluation will require more Chinese yuan for repayment of the same foreign exchange loan. If there is a major devaluation at the same time that domestic interest rates climb, individual enterprises, with their new freedoms to use foreign sources, might gamble that further devaluations are a long way off and start borrowing internationally. The withholding of official guarantees for hard currency repayment to foreign lenders will then become an important credit-control mechanism.

The division of Net Material Product growth into its investment and "other" components in Table 5-1, above, allows speculation about future economic growth. With urban reforms and the roughly 20 percent pace of industrial growth in 1985, and in spite of relatively poor weather for agriculture, non-investment sources of growth in 1985 declined only slightly. For how many years can China enjoy this boost to its overall growth? Given the large inventory of inefficient capital assets, such "bonus" growth could continue into the 1990s. Given the surprising speed with which official policy succeeded in slowing the economy in late 1985 and the equally rapid recovery apparently under way in early 1986, the pattern of sustained growth enhancement from extra capital productivity is likely to continue. If this is the case, per capita income in the intermediate- and long-run could rise much more rapidly than is generally anticipated.

Since China's initial opening to the West and Japan in the late 1970s, acquisition of foreign technology has been a consistently important part of investment planning. Patterns of imports over the last 12 months have confirmed this bias for capital goods. At the same time, China has shown itself increasingly willing to import capital goods and raw or semi-finished materials to alleviate critical bottlenecks (see chapter 7 on trade and payments). The Vice Director of the State Planning Commission stated in March of this year, at the height of the foreign exchange run-down, that foreign investors will be encouraged to increase the production of goods whose quantities now fall short of domestic demand. China is also seeking foreign cooperation to develop sources of raw materials and to modernize existing plants and equipment. The announcement of production goals for the 1986-1990 five-year plan was followed by a list of cooperative projects to be discussed with foreign firms. For example, non-ferrous metal production is to be doubled in the next five years under the Plan and China will soon be offering cooperative projects in this area to foreign investors.

In sum, China's sustained investment growth is a fundamental part of the overall process of rapid development apparently now under way. The policies and programs now being implemented point to good prospects for both continued long run increases in not only investment levels but also investment quality. In the effort to improve quality, foreign methods, equipment, and materials will play increasingly important roles.

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CHAPTER SIX -- Banking and Finance

EXECUTIVE SUMMARY

TRENDS

* "Radical" reform experiments are allowing for the lease of enterprises to managers and enterprise issuance of negotiable bonds and securities.
* 1985 state budget revenues grew 27 percent, reflected large enterprise tax receipts, and resulted in a small surplus.
* State budget expenditure shifts reflect a reduced state role in 1985-86 investment, and a shift to government services more closely associated with market economies.
* The sharp slowdown in the late-1985 money supply growth and its early 1986 resurgence coincided and probably influenced matching cycles of industrial contraction and recovery.

POLICY

* Leaders in both the Ministry of Finance and the People's Bank of China strongly support the overall industrial reform movement with their increasingly bold financial reforms.
* Official policy is to move in the direction of financial markets with discounted and rediscounted financial trading.

PROBLEMS

* Budgetary expenditure cuts and subsequent spending sprees are too crude a mechanism for controlling growth and inflation.
* The banking system controls too little of China's money supply, and market freedoms will reveal the inflationary mismatch between circulating purchasing power and available goods and services.

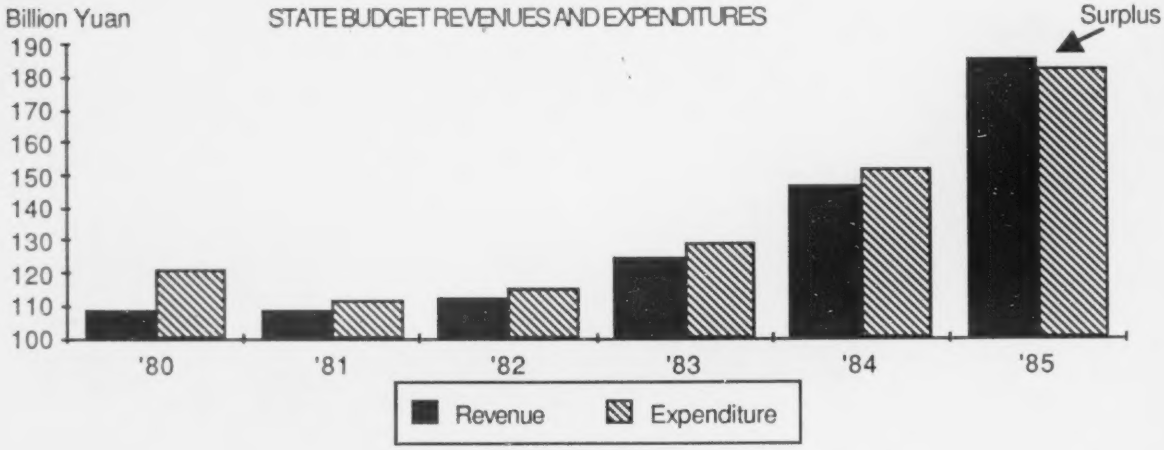
PROSPECTS

* What are essentially "radical" reforms in banking and enterprise finance will continue and spread.
* The state budget will continue to be roughly balanced, in spite of increased subsidies and moderating tax revenues.

TRENDS

Although the appearance of what some have called "radical" reforms in enterprise finance are the most exotic developments in China's financial sectors, probably the most fundamental trend is the on-going shift from China's traditional heavy policy dependence on fiscal measures to a balanced reliance on both fiscal and monetary tools to influence the macroeconomy. The state budget is balanced and growing more rapidly than the economy itself, largely as a result of rapid growth in enterprise tax revenues, in turn reflecting the improved financial health of the enterprises themselves. The structure of expenditures shows a clear and surprisingly rapid shift in the direction of reduced direct budgetary influences on national investment levels, with expenditure patterns changing more in the direction of patterns typical for market-oriented economies. At the same time, subsidies have been made explicit and have begun to appear on the expenditure side of the budget, although the 1986 budget anticipates an unexpected, and in one sense camouflaged, increase in total subsidies. Finally, movements in the money supply have begun to exhibit a close relationship with shifts in industrial growth rates, and it is increasingly apparent that manipulation of credit and interest rates has become an important policy mechanism.

Diagram 6-1



The most intriguing trends in early 1986 have been the announcement of on-going experiments with the leasing of enterprises to individual managers and their backers in a "management responsibility" system reminiscent of the earliest accounts of the farm household responsbility system, which eventually revolutionized China's rural economy. Although it is too early to evaluate the reports, the scale of the experiments indicates a serious consideration of divestiture of industrial assets to semi-private control. These experiments are enhanced by the appearance of negotiable bonds and securities for both state and cooperative enterprises, especially in the South, but also in the Northeast, where the leasing experiments are most publicized. News of these experiments adds significance to trends in more established financial dimensions which appear to support the enterprise reforms very strongly. The paragraphs below concentrate on these more traditional developments.

Table 6-1
STATE BUDGET 1977-1985

	(Billion Yuan)			(Percent Growth)	
Year	Revenue	Expenditure	Surplus or Deficit(-)	Revenue	Expenditure
1977	87.45	84.35	3.10	n/a	n/a
1978	112.11	111.09	1.02	28.2	31.7
1979	110.33	127.39	-17.06	-1.6	14.7
1980	108.52	121.27	-12.75	-1.6	-4.8
1981	108.95	111.50	-2.55	.4	-8.1
1982	112.40	115.33	-2.93	3.2	3.4
1983	124.90	129.25	-4.35	11.1	12.1
1984	146.50	151.50	-5.00	17.3	17.2
1985	185.41	182.59	2.82	26.6	20.5
1986 *	214.15	214.15	0.00	15.5	17.3

*NOTE: Estimates announced by State Minister of Finance, Wang Bingqian, 26 March 1986.

SOURCES: Official data from the State Statistical Bureau, communiques, and Ministry of Finance official speeches. (J5BQ01.T5E)

Summary budget statistics are given in Table 6-1, above. Growth of both revenues and expenditures in 1985 is particularly impressive. 1985 revenues exceeded the planned level by 20 percent, while expenditures were 16 percent more than budgeted, resulting in the first budget surplus since 1978. For 1986, the budget anticipates continued rapid growth of roughly 30 billion yuan for both revenue and expenditures, even though industrial growth and hence enterprise profits are likely to be lower than in 1985.

Table 6-1 is useful also for reviewing the 1979-81 fiscal crisis which had such a significant impact on economic growth and policy in the very early 1980s. The crisis can be viewed in two dimensions. First, revenues actually declined after 1978 and did not start to recover until 1982. Second, expenditures continued to grow through 1979, before declining somewhat in 1980 and even more sharply in 1981. This budget cutback in 1981 reestablished a basic balance, but the resulting reduction in state investment levels sent heavy industry into a decline which has generally been misinterpreted as a deliberate "readjustment" of the economy.

The 1979-81 crisis is useful as a contrast to the 1985-86 slow-down and recovery, in which state investment was again cut, but only briefly, and in which reduction of the money supply through bank lending cutbacks played a more important role. (For a discussion of the 1985 state investment adjustment, see Chapter 5.)

Table 6-2, below, gives details of the actual 1985 and anticipated 1986 budgets. In general, shifts in definitions make historical comparisons difficult at this level of detail. For example, the most important category for budgetary revenues in 1985-86, taxes, was of minor significance only a few years ago, when the bulk of revenues came from all enterprise profits, which were remitted directly to the state.

On the expenditure side, China's gradual shift to a market-oriented economy is shown in reduced state investment and increased state expenditures on education and other public services considered normal for governments in the West. 1986 budget expenditure increases are specified for agriculture, education, health, and national defense, but 1986 outlays for capital construction are actually expected to decline, and investments in technical transformation (upgrading of existing plant capacity) promise a sharp drop. State investment is perhaps the single most characteristic attribute of any economy considered centrally planned or "socialist." To the degree that China's public finance is allowing the investment initiative to shift over to a more decentralized decision-making process, China's economy is undergoing a fundamental transition.

An additional traditional feature of China's economy has been subsidies for enterprises running at a loss and subsidies to keep the urban cost of living low. These subsidies appear to be increasing, and are also becoming more visible, as budget presentations make them more explicit and shift them over to the expenditure side, rather than leaving them as negative revenues, the tradition inherited from Maoist China.

Although subsidies were reported as a single negative revenue item before 1986, they actually consisted of two types of payments: production enterprise loss subsidies, and price subsidies. Price subsidies are those that the state pays indirectly to workers to offset the cost of staples such as grain, edible oil, coal, and leather products. These subsidies take the form of payments to commercial units, permitting them to sell their products more at a lower price. Enterprise loss subsidies are those that the state provides to production enterprises in certain industries, such as coal, to keep the prices of their products at an affordable, and hence artificially low, level.

Table 6-2
STATE BUDGET REVENUES AND EXPENDITURES BY TYPE
1985-86
(billion yuan and percent of total)

Item	1985 billion yuan	1985 percent of total	1986 (forecast) billion yuan	1986 (forecast) percent of total
REVENUES	185.41	100.0	214.15	100.0
Taxes	201.08	108.5	205.65	96.0
Energy/Transport	14.27	7.7	15.00	7.0
Treasury Bonds	6.04	3.3	6.00	2.8
Foreign Loans	2.50	1.3	5.50	2.6
Subsidies	-48.03	-25.9	-27.62	-12.9
Other	9.54	5.1	9.62	4.5
EXPENDITURES	182.59	100.0	214.15	100.0
Capital Construction	56.97	31.2	56.78	26.5
Technical Transform	10.05	5.5	6.24	2.9
Agriculture	10.16	5.6	11.79	5.5
Education, Health	31.72	17.4	35.70	16.7
National Defense	19.15	10.5	20.02	9.3
Administration	13.30	7.3	14.38	6.7
Domestic Debt Service	.00	.0	1.15	.5
Foreign Debt Service	3.26	1.8	4.10	1.9
General Reserve	.00	.0	3.00	1.4
Subsidies	.00	.0	27.72	12.9
Unspecified	38.00	20.8	33.28	15.5

SOURCES: State Finance Minister's 3/26/86 speech (J6BCF02S.T6F).
Beijing Review, 5/19/86, pp. V-X.

For 1986, the Ministry of Finance announced that for the first time, price subsidies would be reported as expenditures rather than as negative revenues. Enterprise loss subsidies, however, remained as negative revenue items. This reporting change yields an artificial book-keeping increase in both state revenues and expenditures of more than 20 billion yuan (see Table 6-2) while camouflaging the fact that total 1986 subsidies are actually expected to rise, from 48 billion yuan in 1985 to 55 billion yuan in 1986.

A more important trend with respect to state subsidies is not that they are expected to increase in 1986, but that there is now to be a public report on the size of subsidies in the two major categories. The degree to which these subsidies can be reduced in the future will be an important indication of the success of enterprise management and price reforms.

Table 6-3
MONTHLY GROWTH OF TOTAL INDUSTRIAL OUTPUT
June 1985 through April 1986
(Percent growth over same month of previous year)

Year/Month		Percent Growth Official Rate	 Seasonally Adjusted Rate
1985	Jun	22.9	9.4
	Jul	20.2	6.5
	Aug	17.4	.4
	Sep	14.5	-6.6
	Oct	11.7	-12.4
	Nov	8.8	-28.4
	Dec	10.2	9.7
1986	Jan	5.6	36.5
	Feb	.9	-2.8
	Mar	6.0	19.1
	Apr	3.9	16.5

SOURCES: Monthly data from **China Economic News**, Hong Kong, various issues and State Statistical Bureau, **Monthly Statistical Bulletin**, Peking, various issues. Seasonally adjusted growth rates are Rock Creek Research calculations.

A final important element in China's recent financial trends is the money supply's growth pattern. Although many factors conntributed to the recent pattern of surge, slowdown, and recovery, changes in the money supply are probably the most significant visible causal factor. Data on the 1985-86 industrial slow-down and recovery are given in Table 6-3, above. (For more complete coverage of China's recent industrial trends, see Chapter 3, above.) From November 1984 to September 1985, China's industrial output increased by 17 to 25 percent every month, as measured over output in the same month of the previous year. During this same period, China's money supply grew rapidly, with 55 percent growth in 1984 and 54 percent growth in the first half of 1985. These money growth trends are detailed in Table 6-4, below. As industrial growth slowed in late 1985, however, fourth-quarter money supply growth declined to 17 percent over the fourth quarter level in 1984.

The rapid rate of money supply growth for 1984 and the first half of 1985, shared evenly between currency and enterprise deposits, was a significant acceleration from the 19 percent growth of 1983 and the 8 percent growth of 1982. It was reminiscent of the roughly 25 percent rates of money growth in 1979-80, the years of China's most severe budget deficits. 1984's growth, however, was not the result of government borrowing to cover a deficit. Rather, it represents a very rapid increase in bank lending to enterprises. This difference in the source of money supply increases may help explain why the 1984 expansion resulted in real economic growth and not just inflation.

Table 6-4
MONEY SUPPLY GROWTH 1977-1985

Year	(Billion Yuan) Total Money Supply	Of Which: Currency	Currency Share (percent)	(Percent Growth) Money Supply	Currency
1977	58.01	19.54	33.7	n/a	n/a
1978	58.04	21.20	36.5	.1	8.5
1979	73.66	26.77	36.3	26.9	26.3
1980	91.93	34.62	37.7	24.8	29.3
1981	107.04	39.63	37.0	16.4	14.5
1982	115.70	43.91	38.0	8.1	10.8
1983	137.05	52.98	38.7	18.5	20.7
1984	212.59	79.21	37.3	55.1	49.5
1985	248.32	98.78	39.8	16.8	24.7

SOURCES: Official State Statistical Bureau data and International Monetary Fund data (J5BQ03.T5J).

The reduction in the money supply growth rate for 1985 shows that financial authorities succeeded in reining in the alarming upsurge in the money supply in 1984 and in "soaking up" the excess currency that was issued toward the end of that year. This success was achieved by increasing bank interest rates and the rate paid to holders of state bonds issued to finance key projects, by releasing inventories of high priced goods and gold for sale, and by a host of other traditional money-control policies.

The causes and progress of 1984's money supply increases are particularly difficult to gauge because of the seasonality of Chinese monetary flows. In general, growth of loans and money supply is very low and even negative in the first half of the year, with all of the year's growth coming in the second half, and in some cases all in the fourth quarter. This is perhaps best illustrated by available 1982 data on the growth of total bank loans by quarter, shown in Table 6-5 below.

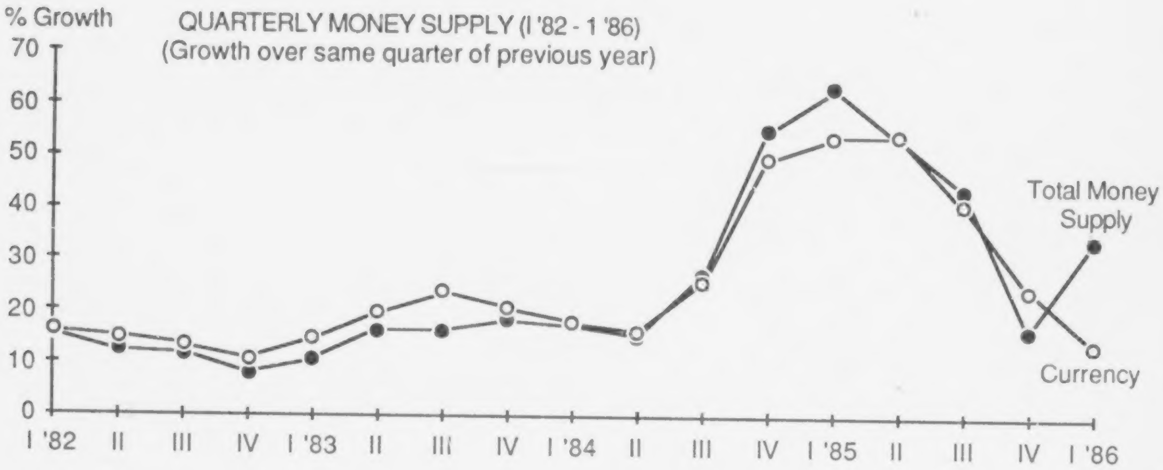
Table 6-5
SEASONALITY IN TOTAL LOANS, 1982

	IV'81	I'82	II'82	III'82	IV'82
Loans (Billion Yuan)	277	266	268	277	305
(Percent Over Previous Quarter)	n/a	-3.7	.7	3.2	10.3

SOURCES: Official data, People's Bank of China.

In 1982, which in many ways was as "normal" a year as there has been in the past five to choose from, the total of loans outstanding only recovered to the level of the previous year by the third quarter. That is, there was no growth from the end of the fourth quarter 1981 to the end of the third quarter 1982. All of the growth in loans outstanding for 1982 occurred in the fourth quarter: October, November, and December. In his March 1985 speech before the Party Congress, Premier Zhao complained that 48 percent of the 1984 loan increase occurred in December. But when we consider the seasonality illustrated above, and remember how important December is for meeting quotas and concluding state procurements, 48 percent may not be very far out of the ordinary at all, even if it is a little high. It certainly is not as high as it was made out to sound in Zhao's speech, where no mention at all was made of seasonality. The importance of seasonality is further illustrated by quarterly data on the money supply, which go back to 1980 and are presented in Table 6-6 below.

Diagram 6-2



The money supply growth rates in columns 4 and 5 of Table 6-6 are calculated over the previous quarter and show that in virtually every year the money supply falls in the first two quarters, grows moderately in the third quarter, and then grows very fast in the fourth quarter, only to fall back again in the first quarter of the following year as the pattern begins again. This pattern is even more exaggerated for the currency portion of the money supply. On a quarter-to-quarter basis, then, it is not unusual for most of the money supply growth to come in the second half of the year, as reported by Zhao for the late 1984 upsurge.

An important part of Table 6-6, however, shows data for the third quarter of 1984, when the pattern of moderate growth was broken. On a quarter-to-quarter basis, the money supply grew 16 percent instead of the usual 5 or 6 percent. On an annual basis, money growth was 27 percent, rather than the 11-18 percent of the previous several years. This, then, is when China's "overheated" money supply growth really began, in the third quarter of 1984, not at the end of the year, and certainly not as late as December. It is not surprising that monthly industrial output data also show acceleration in industrial growth beginning in July of 1984, coinciding with the increase in the money supply. (For details of China's monthly industrial growth, see Chapter 3, Industry.)

Table 6-6
QUARTERLY MONEY SUPPLY 1981-1986

Year/Qtr		Amount (Billion Yuan)			Growth Over Previous Quarter (Percent)		Growth Over Same Quarter, Previous Year (Percent)	
		Total Money Supply	Of Which: Currency	Currency Share (percent)	Total Money Supply	Of Which: Currency	Total Money Supply	Of Which: Currency
1980	IV	91.93	34.62	37.7	n/a	n/a	n/a	n/a
1981	I	88.31	32.56	36.9	-3.9	-6.0	n/a	n/a
	II	86.83	30.64	35.3	-1.7	-5.9	n/a	n/a
	III	92.12	33.32	36.2	6.1	8.7	n/a	n/a
	IV	107.04	39.63	37.0	16.2	18.9	16.4	14.5
1982	I	102.14	37.79	37.0	-4.6	-4.6	15.7	16.1
	II	97.56	35.25	36.1	-4.5	-6.7	12.4	15.0
	III	102.95	37.74	36.7	5.5	7.1	11.8	13.3
	IV	115.70	43.91	38.0	12.4	16.3	8.1	10.8
1983	I	113.13	43.33	38.3	-2.2	-1.3	10.8	14.7
	II	113.52	42.20	37.2	.3	-2.6	16.4	19.7
	III	119.73	46.73	39.0	5.5	10.7	16.3	23.8
	IV	137.05	52.98	38.7	14.5	13.4	18.5	20.7
1984	I	132.82	51.12	38.5	-3.1	-3.5	17.4	18.0
	II	131.01	49.10	37.5	-1.4	-4.0	15.4	16.4
	III	152.10	58.72	38.6	16.1	19.6	27.0	25.7
	IV	212.59	79.21	37.3	39.8	34.9	55.1	49.5
1985	I	216.96	78.76	36.3	2.1	-.6	63.3	54.1
	II	201.24	75.75	37.6	-7.2	-3.8	53.6	54.3
	III	218.29	82.71	37.9	8.5	9.2	43.5	43.3
	IV	248.32	98.78	39.8	13.8	19.4	16.8	24.7
1986	I	291.03	89.88	30.9	17.2	-9.0	34.1	14.1

SOURCES: Official State Statistical Bureau data and International Monetary Fund data. (J5BQ05.T6A)

In sum, movements in China's money supply appear to have had as significant an influence on China's economy as budgetary shifts, especially in recent years and months. These developments, which are still on-going, imply that tools of economic analysis usually reserved for market economies are becoming useful for China as well.

POLICY

China's financial policies, as expressed in official statements and documents, and as revealed by evolving reforms, have two major elements. First, they are restructuring the fiscal and banking systems to make them more compatible with China's new profit incentives and competitive economic environment. Second, both budgetary policy and monetary policy are increasingly used to control the overall macroeconomy by stimulating it during times of slowdown and cooling it off in times of rapid growth. Both broad policy elements have numerous dimensions, all of which reflect the degree to which reforms have pervaded China's overall economic system.

China's fiscal adaptation to industrial reforms is clearly seen in the evolution of the budget, reviewed above. In particular, the investment role of the state budget has been stabilized for 1986, with essentially no anticipated growth in outlays, while non-budgetary investments are expected to continue to grow rapidly. Furthermore, of those investments financed from the budget, an increasing share is to be dispersed in the form of interest-bearing loans rather than grants. Minister of Finance Wang Bingqian announced as part of his 1986 budget presentation that 38 out of 58 billion yuan in investment funds would be allocated in the form of loans.

In addition to this shift, the state budget for 1986 is also applying "guidance planning" to the remaining state investments. In particular, use of state funds for investments in housing and in "processing industries" is being discouraged in favor of investment in transportation and critical heavy industrial sectors, such as steel, energy, and chemicals, which are financially not as able to benefit quickly from reform incentives because of China's price system. In general, the state budget expenditure pattern accelerates enterprise independence. This policy emphasis is also promoted by the explicit presentation of subsidy levels in budget reports and policy statements emphasizing the need to reduce subsidies of all kinds.

The same over-arching policy of accomodation to reforms is clear on the revenue side of the budget as well. Taxes have virtually replaced revenue remittances, and tax rates are being adjusted for individual enterprises as compensation for their dependence on China's still-irrational price system. In addition, experimental tax forms have appeared in the budget, most notably a value-added tax.

China's banks and banking system are promoting an even more experimental accomodation with reforms than the state budget is. In contrast to its traditional role of disbursing state funds and monitoring their use, China's banking system is increasingly acting as a financial intermediary between those with savings and those wanting to borrow. China's highest banking official, head of the People's Bank of China Chen Muhua, has stated clearly that China's overall policy is to move away from state planning towards emphasis on policy guidelines, interest rates, and capital markets.

The increased official effort to raise funds for banks is adding many elements of Western and Japanese banking practices to China's system. A growing number of banks are permitted to take savings deposits; interest rates for savings deposits are being raised; and limited experiments have been undertaken with a postal savings system under which post offices act as savings bank branches. Perhaps even more fundamental is the policy of experimental inter-bank loans at the branch level to balance local supply and demand for money. Without the reforms, Chinese banks with excess loan demand have no recourse but to request additional funds from their own parent banks, a bureaucratic process which is time-consuming and often brings few results. Under the reform system, which is in experimental stages in south China, bank branches can borrow the needed money at negotiated interest rates from other bank branches.

This same market-oriented flexibility is apparent in the experimental circulation of interest-bearing bonds and securities, in some cases with equity shares. In some experiments the bonds and shares are negotiable and can be sold to third parties without the permission of government authorities.

Chen Muhua has qualified these policies as experimental only, but has also stated that China's long-term financial policy goal is to have strong domestic capital markets with a full range of discount and rediscount financial trading activities.

All of these policy positions and reforms reinforce the conformity of fiscal and monetary policy to China's overall economic and enterprise management reforms. A second policy direction is the use of the budget and banking system to control the overall economy's actual rate of growth. After early 1985, when the economy was clearly overheated, mid-1985 contraction of the money supply was more severe than usual, helping to limit inflation and cut excess demand for investment goods. In August and September state investment projects were cut or postponed, and in October investment bank loans were suddenly contracted. The money supply growth was slowed significantly and the industrial growth rate slowed in response.

Conversely, by early in 1986 state investment flows had begun again and the money supply growth had recovered, restimulating growth. It is difficult to say how carefully these policy steps are planned and carried out, and in many ways the investment cutbacks have the same effect they did in 1980-81: arbitrary across-the-board cut-backs with little or no concern for the efficacy of individual investment projects. Regardless of whether China's policies for macroeconomic control have made much of a transition from a clumsy fiscal mode to a more sophisticated financial and market-oriented mode, they represent a major break from China's centrally-planned past, when output growth was largely controlled in physical terms through the state plan.

PROBLEMS

China's fiscal and banking problems may be most serious at the macroeconomic level, while various technical problems are more manageable. The macroeconomic difficulties can be defined by two separate but related categories: management of growth in the economy when industrial prices are poorly aligned with actual scarcity values, and effective money supply control when so much of the money supply, and in particular the currency portion, has been built up in a time of rationing and price controls and hence is far in excess of available consumer and investment goods supplies.

The greatest difficulty facing China's fiscal policy-makers is management of overall economic growth without a simple method for determining the worth of micro-level investment decisions. Bureaucratic methods for making these choices, such as emphasizing the energy, transport, metals, and chemicals sectors, are too crude. They do not discriminate between good and bad projects within and without these large categories, and as a result, across-the-board cuts or increases in investment spending often damage good projects and encourage bad ones. A more sophisticated control mechanism, influence over interest rates, would affect all projects with marginal profitability. But China's price system is still largely unreformed. Profitability is not necessarily an indication of the worth of an operation, and China will need to struggle with the cruder controls of budget expenditures -- mainly for investment and subsidies -- in order to manage total demand.

China's second major financial problem is controlling the effective money supply when so much of it is outside the banks and when its growth in previous years came in an environment within; which demand was controlled by ration coupons and limited goods availability, rather than by prices. In other words, there is no reason to believe that three major interrelated components of China's economy -- the money supply, goods availability, and prices -- are in any kind of balance at all. As a result, increased sophistication of financial intermediation and increasingly loose control over various markets will naturally result in inflation difficult to discipline with any other than the crudest macroeconomic policy tools.

The degree to which the money supply is out of banking hands is reflected in the admission by Minister of Finance Wang Bingqian that 22 percent of enterprise transactions are conducted in cash, compared with the 7-percent norm for the United States and Japan. Although this comparison with far more sophisticated economies certainly exaggerates China's overemphasis on cash transactions, the virtual absence of personal demand deposits (checking accounts) and the large stock of personal savings in and out of banks all add to the degree to which China's money supply, large in relation to goods availability, will be difficult for financial authorities to control.

Although the two problems of managing economic growth and controlling the money supply are policy-makers' greatest challenges, more specific problems also deserve attention. In particular, mid-1985 wage reforms apparently raised costs for many industrial enterprises and exacerbated subsidy needs from the state budget. Minister of Finance Wang Bingqian specifically raised this problem as one requiring adjustment. A second problem is more familiar and involves the control of investment outside the state plan as the economy recovers and as industrial growth gathers momentum in late 1986 and early 1987.

Finally, corruption and tax evasion are recent problems difficult for poor-country administrations to deal with. There are numerous accounts of serious tax evasion in China, many resulting from the close relationship between local political leaders and the heads of industrial enterprises. Enterprises have been falsely put in a lower enterprise category to avoid higher taxes, and in the most extreme case, some provinces have refused to remit some taxes, such as the bonus tax.

Sichuan, whose population of 100 million people makes it China's most populous province, is one such province which has refused to pay taxes. The next two most populous provinces, Henan and Shandong, both remitted substantially less bonus tax per capita than the national average. Loopholes in tax collection methods are also part of the tax evasion problem. In Hebei province, unpaid taxes totaled over 200 million yuan from 1980 to 1984. Provincial officials have stated that tax evasion has affected state revenue, hindered the modernization program, and corrupted Party style and cadres. Although problems of tax evasion are common in the Chinese press, so are reports of success in correcting abuses. The importance of the issue is probably greater as a sign of tension between Peking and localities than as a serious immediate cause of revenue failure.

PROSPECTS

China's fiscal and monetary prospects suggest continued growth of state budget revenues at a rate lower than in 1985 and resurgent expansion of the money supply after the 1985-86 winter slowdown. In general, both the budget and the banking system will continue to implement market-oriented reforms and experiment with more decentralized arrangements for financial intermediation. Leadership in both the Ministry of Finance and the People's Bank of China appears strongly in support of the reform movement, even what some have called the "radical" reform movement, which is to say the development of capital markets and increased independence for industrial enterprise managers.

Past draft budgets have not been accurate guides to actual revenue levels, but the general health of the economy and in particular the recovery of industrial growth rates after the late-1985 deceleration mean that growth of state budget revenues in 1986 will again be high, although probably not as high as in 1985. The source of the revenue increase will be enterprise taxes, as enterprise profitability continues to improve. The most significant uncertainty in the 1986 budget is the level of subsidies needed for enterprises running losses and for price supports as farm prices continue to adjust. If there is a significant harvest recovery from the 1985 decline, which seems likely, state outlays for crop purchases could again be high, given the higher procurement prices generally contracted this year. In short, if revenues do grow more slowly in 1986 than in 1985, and if subsidies and farm outlays are as large as expected, the state budget could slip into deficit for the year. This would not be a sign of any chronic imbalance, because the deficit would not be large and would be caused by transitional factors.

In the banking sector, money supply is likely to continue to grow at the new higher rate recorded for the first quarter of 1986, and the various financial instruments appearing throughout the country will continue to proliferate. With no major consumer price reforms scheduled for 1986, the banking authorities apparently feel that there is less risk of visible, high inflation, making it easier to promote both growth and price reform with easier credit.

1986-87 will also see the continuation of banking reforms giving more autonomy to bank branches, allowing them to operate more freely in a financial market environment, and making it easier for them to raise funds both from private depositors and through interbank channels. The uncertainty is not the direction of the reforms and the evolution of the banking system, but rather the speed with which new instruments and institutional freedoms are introduced. The pace of reform and experimentation in early 1986 has already been much more rapid than expected, in spite of the fact that 1986 was meant to be a period of relaxation from the 1984-85 pace.

In short, prospects in state finance and banking promise more of the reform-oriented progress so evident in 1984-86. Official policy statements, current developments, and the manageability of existing problems give no reason to expect anything other than an increasingly sophisticated and healthy financial picture for some time to come.

CHAPTER SEVEN -- Trade and Payments

EXECUTIVE SUMMARY

TRENDS

* After four years of trade surpluses and reserve accumulation, China's 1985 imports surged while exports stagnated.
* China's 1985 trade deficit was 9.98 billion dollars, due to import growth of almost 50%.
* The import surge is concentrated in investment goods and is closely related to the introduction of urban reforms.
* The deficit with Japan is three-fourths of the total deficit and is concentrated in markets with strong prospects.
* Sharp declines in world oil prices have cut China's export earnings.
* Foreign exchange reserves fell 2.5 billion dollars in 1985, and a further 1.6 billion in the first quarter of 1986.

POLICY

* By March 1985 China cut consumer imports dramatically, but vowed to honor all investment good import contracts.
* To deal with sagging exports, China has begun a gradual devaluation of the yuan and recentralized some controls.
* China's overall strategy is to use its limited foreign reserves to import technology and critically short materials.
* China has become more innovative in its approach to export financing, and has shown a willingness to compete with Third World countries.
* Borrowing to finance imports appears to be widely accepted, and is likely to increase.

PROBLEMS

* Sharp declines in world oil prices have cut China's export earnings.
* China's major trade problem is one of internal discipline as managerial decentralization and price responsiveness spread.
* High "luxury" pricing for domestic manufactures and an overvalued currency have made exporting unattractive.
* A rapid drawdown of foreign exchange reserves has increased international skepticism about China's ability to maintain high levels of foreign trade.

PROSPECTS

* The current devaluation will continue until the yuan is 3.5 or 4.0 to the dollar some time in 1986.
* Given continued high levels of imports in 1986, China will borrow heavily, in an attempt to hold foreign exchange reserves at politically tenable levels.

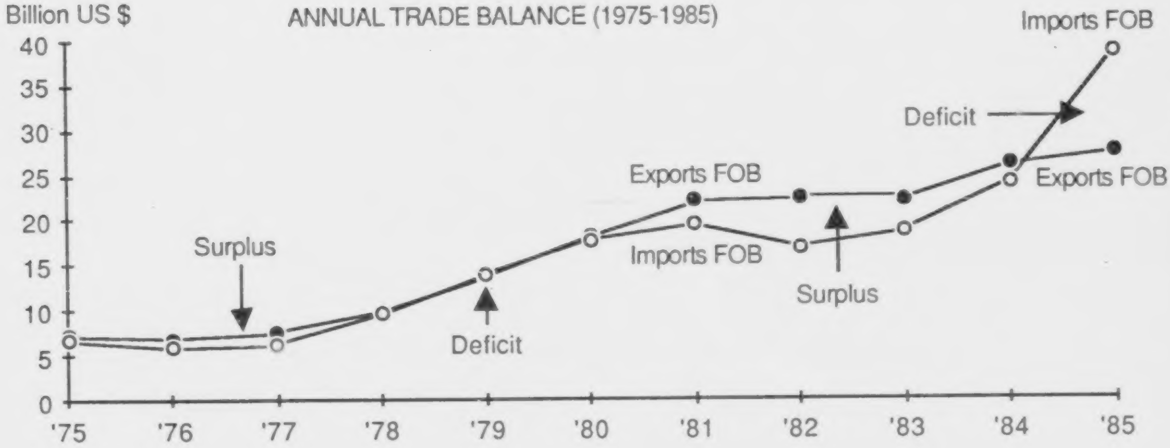
TRENDS

Table 7-1
CHINA'S FOB TRADE BALANCE, 1975-1985
(Billion US $)

	Exports FOB	Imports CIF	FOB-CIF Trade Balance	Exports FOB	Imports FOB	FOB Trade Balance
1975	7.26	7.49	-.23	7.26	6.67	.59
1976	6.86	6.58	.28	6.86	5.86	1.00
1977	7.59	7.21	.38	7.59	6.34	1.25
1978	9.75	10.89	-1.14	9.75	9.58	.17
1979	13.66	15.67	-2.01	13.66	13.95	-.29
1980	18.10	19.94	-1.85	18.10	17.75	.35
1981	22.01	22.01	.00	22.01	19.37	2.63
1982	22.39	19.31	3.08	22.39	16.89	5.50
1983	22.23	21.39	.83	22.23	18.72	3.51
1984	25.97	27.42	-1.45	25.97	24.07	1.90
1985	27.42	42.74	-15.33	27.42	37.40	-9.98

Sources: 1975-1980 from Ministry of Foreign Trade, 1980-1982 and 1985 on Official Chinese customs basis, 1982-1984 on official payments basis. (J6bcx71t.c6f, DT).

Diagram 7-1



As a result of the open-door policy following Mao's death, China's foreign trade turnover has more than quadrupled between 1975 and 1985. China's self-imposed commercial isolation is apparently over. The trade pattern during this period of rapid growth has not been even. The trade balances in Table 7-1 show a deficit in 1979, strong surpluses in 1982-83, and the appearance of a very large deficit in 1985. The more recent trade deficit is a result of rapidly growing imports of investment goods while exports in general have stagnated. The import boom beginning in late 1984 has mostly benefitted Japan, which, in addition to substantial steel exports to China, has out-competed the United States and West Germany for China's large and growing purchases of machinery, electronic equipment and vehicles. Japan's dominance, however, may have reached a high point during late 1985; the U.S., EEC, and the Soviet Union have all registered gains in early 1986 while Sino-Japanese trade has declined. Trade developments are also closely related to China's foreign exchange system. 1985 saw both a dramatic fall in foreign exchange reserves and China's first currency devaluation in five years in the third quarter. In addition, reports indicate that borrowing was high in 1985.

Table 7-2
CHINA'S BALANCE OF PAYMENTS
(Million US $)

	1980	1981	1982	1983	1984	1985
CURRENT ACCOUNT						
Commodity Trade Exports (FOB)	18099	22007	21125	20707	23905	27418
Commodity Trade Imports (CIF) (-)	-19944	-22014	-19293	-21390	-26744	-40149
CIF/FOB Conversion Ratio	.89	.88	.87	.88	.87	.88
Commodity Trade Imports (FOB) (-)	-17750	-19372	-16876	-18717	-23891	-37402
Commodity Trade Balance	349	2635	4249	1990	14	-9984
Services Income	2409	3130	3604	4028	4819	
Services Expenses (-)	-2703	-3333	-2665	-2289	-3245	
Total Net Services	-294	-203	939	1739	1574	
Net Private Transfer Receipts	640	464	530	436	305	
Net Government Transfer Receipts	-70	108	-44	75	137	
Total Net Transfer Receipts	570	572	486	511	442	
Invisibles Receipts (NET)	276	369	1425	2250	2016	3490
Current Account Balance	625	3004	5674	4240	2030	-6494
CAPITAL ACCOUNT						
Long-term Lending	956	1736	2923	2653	4241	
Long-term Borrowing (-)	-2716	-1987	-3312	-2702	-4128	
Long-Term Lending (Net)	-1760	-251	-389	-49	113	
Short-term Lending	236	1190	295	334	1113	
Short-term Borrowing (-)	-312	-231	-244	-59	-223	
Short-Term Lending (Net)	-76	959	51	275	890	
Total Lending (Net)	-1836	708	-338	226	1003	-2711
Increase in Reserves	108	2511	6291	3648	95	-2507
Capital Account Balance	-1728	3219	5953	3874	1098	-6494
Errors and Omissions (Calc)	2353	-215	-279	366	932	0
FOREIGN EXCHANGE RESERVES (Official)	1875	4386	10677	14325	14420	11913
(IMF)	2262	4783	11135	14476	16705	11913

* NOTE: Foreign Exchange Reserves prior to 1984 are calculated backwards based on official change in reserves published for 1982-1984.

SOURCES: Official data, (1982-1984), IMF estimates, RCR estimates. (J6bcx72t.c6f, dt)

Table 7-3
SUMMARY QUARTERLY BALANCE OF PAYMENTS FOR CHINA, 1984-86'I
(Million US $)

	1984'IV	1985'I	1985'II	1985'III	1985'IV	1986'I
CURRENT ACCOUNT						
Commodity Trade Exports	7103	5702	6262	6793	8661	5840
Commodity Trade Imports (-)	-7959	-7525	-8859	-9253	-11765	-7674
Commodity Trade Balance	-856	-1824	-2596	-2459	-3104	-1834
Invisibles Receipts (NET)	650	800	840	900	950	1160
Current Account Balance	-206	-1024	-1756	-1559	-2154	-674
CAPITAL ACCOUNT						
Total Lending (Net)	-237	2134	-695	-3297	-1477	889
Increase in Reserves	31	-3158	-1061	1738	-677	-1563
Capital Account Balance	-206	-1024	-1756	-1559	-2154	-674
Errors and Omissions (Calc)	0	0	0	0	0	0
FOREIGN EXCHANGE RESERVES	N/A	11262	10852	12590	11913	10350
FOREX FROM IFS	16705	13660	13565	12592	11913	N/A

Sources: Commodity trade figures based on information released by Chinese Customs Administration; invisibles for 1985 are Rock Creek Research estimates based on reported year-end total, for 1986'I see China Daily (4/18/86); foreign exchange reserve figures based on reports from various sources. (j6bcx73t.c6f, dt).

Periods of commodity trade surplus in the early 1980s helped China build foreign exchange reserves up to a level of 14.4 billion dollars by the end of 1984. The sharp decline in 1985 brought them down to 11.9 billion dollars, a level covering only three months of imports at fourth quarter trade levels. Imports were cut back in the first quarter of 1986, but it is difficult to know whether this reflects an official desire to hold down import levels, or is merely in keeping with an historical trend which shows a seasonal dip in imports during the first two quarters of every year. For details on China's balance of payments see Tables 7-2 and 7-3, above.

The internal distribution of the reserves, with more in provincial hands, could explain reports of severe foreign exchange shortages in Peking. When foreign exchange reserves were quite high, as in 1983 and 1984, import policy was relatively open, and foreign exchange flowed more freely. Now that the supply of foreign exchange has tightened, the trend is towards more restricted access to foreign exchange. Reserve levels appear to have strengthened through the end of the third quarter of 1985 to 12.6 billion, after falling 3.6 billion in the first two quarters. End year and early 1986 figures show new declines, however, to 10.4 billion dollars.

Ownership of foreign exchange holdings (detailed in table 7-4, below) sheds some light on what may have been happening to China's foreign exchange reserves over the past several quarters. There has been a significant and continuing shift in ownership of reserves from State accounts to Bank of China

(BOC) accounts. So-called State-owned reserves declined precipitously from early 1985 to the present, from 68 percent of the total in March of 1985 to 25 percent in March of 1986. While the distinction between the two forms of holdings is not entirely clear, in general the State-held reserves appear to be linked to China's current account transactions (exports, imports, transfers and services) and the BOC holdings linked to capital account transactions (international lending, borrowing and direct investment). A further distinction seems to be that State reserves are allocated to and obtained from end-users through sales and purchases, while BOC holdings are allocated and returned as loans. This scissors pattern is significant because it reflects both China's strategy of borrowing to maintain reserves in the face of current account deficits and the growing power of China's banking system under Chen Mu-hua.

Table 7-4
OWNERSHIP OF FOREIGN EXCHANGE
(Million US Dollars)

	State	Bank of China	Total
Jan 1985	7,375	5,400	12,775
Feb	7,506	4,824	12,330
Mar	**7,682**	**3,580**	**11,262**
Apr	7,177	4,328	11,505
May	6,276	4,901	11,177
Jun	**5,370**	**5,482**	**10,852**
Jul	4,452	7,505	11,957
Aug	3,844	7,616	11,460
Sep	**3,377**	**9,215**	**12,592**
Oct	3,050	9,180	12,230
Nov	2,160	10,590	12,750
Dec	**2,640**	**9,260**	**11,900**
Jan 1986	3,013	8,133	11,146
Feb	2,859	8,281	11,140
Mar	**2,555**	**7,793**	**10,348**

SOURCES: Bank of China data reported in the **China Economic News**, various issues, and the **China Daily**, various issues; (j6bcx74t.c6f).

Historical data at the SITC 1-digit level of aggregation in Table 7-3 indicate major long-term trends in the makeup of China's growing commodity trade. Temporary increases of food and raw materials in 1980-81, (categories 1 and 3,) were associated with an increased need for grain and cotton due to very bad drought and flood conditions in China at that time. In contrast to the short term fluctuations, exports of mineral fuels and light manufactures, primarily crude oil and apparel, have grown consistently throughout the period, while imports of chemicals, metals and especially machinery have increased rapidly.

Table 7-5
ANNUAL TRADE BALANCE BY SITC ONE DIGIT TRADE CATEGORIES
(Million US Dollars)

	(0) Food and Animals	(1) Beverages & Tobacco	(2) Crude Materials	(3) Mineral Fuels	(4) Oils & Fats	(5) Chemicals	(6) Materials & Metals	(7) Machinery & Transport	(8) Light Manufactures	(9) Other Commodities	Total
1975	784	59	-13	1035	10	-339	-965	-1605	799	3	-230
1976	813	60	127	872	11	-228	-680	-1560	848	20	280
1977	316	59	-189	1076	-106	-441	-678	-735	1088	-10	380
1978	362	57	-401	1399	-60	-600	-1759	-1441	1310	-8	-1140
1979	113	63	-511	2593	-106	-511	-1827	-3496	1727	-55	-2010
1980	-537	35	-1784	4274	-106	-514	-552	-4503	2500	-91	-1280
1981	-685	-149	-2056	5012	-13	-1260	622	-4693	3086	-20	-1280
1982	-1267	-35	-1332	5029	-30	-1721	414	-1881	3151	662	2989
1983	-270	57	-565	4542	35	-1928	-1910	-2761	3012	621	833
1984	897	-8	-128	5832	62	-2863	-2273	-5819	3478	-626	-1448
1985	2269	-99	-557	6965	13	-3123	-7568	-15760	1585	950	-15325

NOTE: Because of the lack of conversion standards at 1-digit SITC levels, imports in this table are CIF.

SOURCES: 1975-1980 data from RCR Trade Databank, corrected from partner country data in CIA **International Trade Statistics**, various editions. 1981-1985 balances from Chinese Customs Statistics, various editions. (J6bcx75t.c6f, dt).

Switching from annual to quarterly data, the major recent development is the very large deficit in commodity trade. Overall, China's 1985 FOB deficit was 9.98 billion dollars, in spite of consistent growth in exports throughout the year. As was the case for 1984, data for 1985 show that trade was dominated by oil and producer goods. The deficit with Japan continued to account for more than two-thirds of the total deficit, despite a slight fall in imports during the fourth quarter. Within Sino-Japanese trade, machinery and transport equipment account for much of the total shortfall. China's net imports from Japan far overshadow those from the United States. Furthermore, because they are concentrated in investment goods such as electrical machinery, vehicles and telecommunications, Japan's China-bound exports are expected to enjoy continued growth.

Official trade statistics for 1985 and the first quarter of 1986 reveal the rapid growth in China's trade deficit over the last year and a half. Quarterly data, presented in Table 7-6 below, emphasize a steady increase in the size of the deficit through the fourth quarter. The first quarter deficit was due more to weakening exports than growth in imports over end 1984. This led observers to believe that China was tightening control over imports after unruly late 1984 growth. However, as Table 7-6 clearly shows, the even larger trade deficit in second quarter 1985 was due solely to import growth of over a billion and a half dollars, while exports actually recovered. When imports held steady in the first quarter of 1985, rather than falling to match the usual first quarter dip in exports, and grew another 16 percent from first to second quarter, the result was a 6-month trade deficit of almost 5 billion dollars. Total trade exploded in the last two quarters of the year, growing at a rate of 6 and 27 percent in the third and fourth quarters, respectively. First quarter 1986 export results fit the pattern for first quarter trade in previous years, with exports dropping to a level somewhere between the first two quarters of the previous year. Imports, however, declined at a rate faster than normal, indicating that some import contracts, which had been guaranteed through end year 1985, were not renewed. China's quarterly trade pattern in Table 7-6, below, shows imports in both the official CIF form and the more accurate FOB form for balance of payments. (CIF imports double-count invisibles such as shipping and insurance, much of which China pays to itself.)

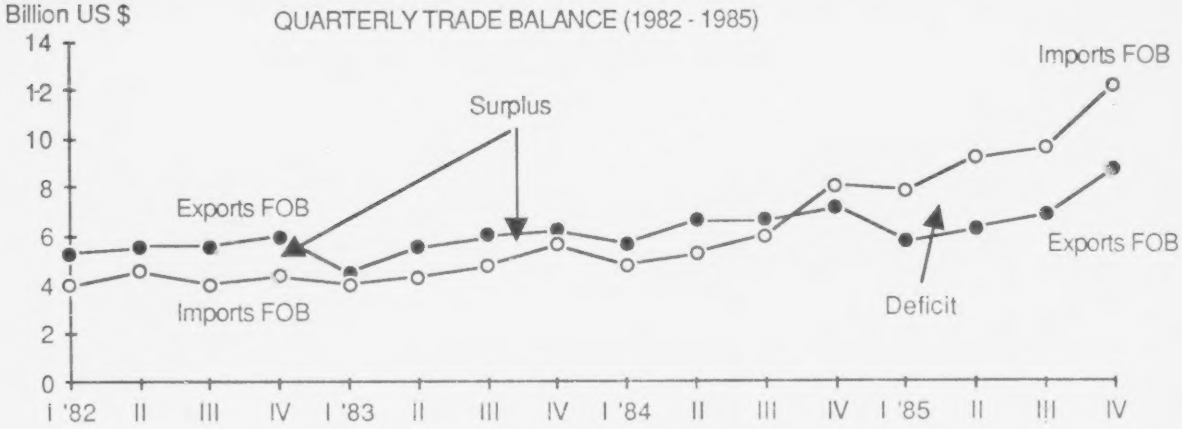
Table 7-6
QUARTERLY TRADE BALANCE, 1981-1985
(Billion US $)

		Fitted Dollar Exports FOB	Fitted Dollar Imports CIF	Trade Balance FOB/CIF	Fitted Dollar Exports FOB	Fitted Dollar Imports FOB	Trade Balance FOB/FOB
		(Billion US $)			(Billion US $)		
1982	I	5.30	4.53	.77	5.30	3.96	1.34
	II	5.55	5.22	.33	5.55	4.57	.99
	III	5.56	4.56	1.00	5.56	3.99	1.57
	IV	**5.98**	**5.00**	**.98**	**5.98**	**4.37**	**1.61**
1983	I	4.50	4.57	-.07	4.50	4.00	.51
	II	5.52	4.93	.59	5.52	4.32	1.20
	III	5.99	5.48	.51	5.99	4.80	1.19
	IV	**6.21**	**6.40**	**-.20**	**6.21**	**5.60**	**.60**
1984	I	5.69	5.43	.26	5.69	4.80	.89
	II	6.57	6.05	.53	6.57	5.28	1.29
	III	6.60	6.79	-.19	6.60	5.97	.63
	IV	**7.10**	**9.15**	**-2.05**	**7.10**	**8.01**	**-.91**
1985	I	5.70	8.60	-2.90	5.70	7.53	-1.82
	II	6.26	10.12	-3.86	6.26	8.86	-2.60
	III	6.79	10.57	-3.78	6.79	9.25	-2.46
	IV	**8.66**	**13.45**	**-4.78**	**8.66**	**11.76**	**-3.10**
1986	I	5.84	8.77	-2.93	5.84	7.67	-1.83

SOURCES: Official Chinese Customs Statistics, various editions.
(J6bcx76t.c6f, dt)

China's import expansion remained very strong in investment goods through all four quarters of 1985. This growth closely parallels the progress of urban reforms, begun in late 1984 and implemented widely during the past year. In 1984, the import surge was concentrated in machinery and transportation equipment, SITC 7, and metals under SITC 6 (see Table 7-7, below). In 1985, heavy industry and investment goods continued to increase but there were also large-scale imports of consumer durables. For details on imports by commodity, see Table 7-8, below. Trade data by SITC one-digit level of classification in Table 7-7 show that the increase in producer good imports was so dramatic that net imports of both machinery and transport equipment (SITC 7) and materials and metals (SITC 6) in the fourth quarter of 1985 were greater than net imports for the last three quarters of 1984 combined. 1985 imports in the SITC 6 category were more than double the value of imports in the preceding year, while those in category 7 grew 171 percent over the same period. In contrast, net earnings from mineral fuel exports, mostly petroleum and traditionally China's greatest foreign exchange earner, hardly grew at all (19 percent).

Diagram 7-2



The slow growth in petroleum export earnings from early 1984 to end-year 1985, in spite of the nearly 35 percent increase in exports by weight, confirms China's strategy at that time of rapidly expanding fuel export volume to maintain earnings in the face of dramatically lower average prices. Early this year, however, China announced that export volumes of crude oil would not be increased over the 1985 total. This decision appears to reflect higher domestic opportunity costs for crude, given the steep decline in world oil prices in the first quarter of this year. (For more on this policy change please see chapter 4 on energy.) As for the remaining major foreign exchange earner, SITC Category 8 (Light Manufactures), net earnings, which had remained stable from 1981 to end year 1984, fell sharply in 1985. Chemical fertilizer imports, which had been a major expense in 1984 and early 1985, dropped significantly throughout the past year, largely in response to agricultural purchasing and price reforms. Within the largest net import category, SITC 7, electrical equipment of various sorts shares importance with vehicles and transport equipment. The rapid growth in the volume of imports of vehicles and equipment sets shown in table 7-8 corresponds to the increases in SITC 7 in Table 7-7.

Table 7-7
QUARTERLY SITC ONE DIGIT NET EXPORTS, 1981-1985
(Million US Dollars)

		(0) Food and Animals	(1) Beverages & Tobacco	(2) Crude Materials	(3) Mineral Fuels	(4) Oils & Fats	(5) Chemicals	(6) Materials & Metals	(7) Machinery & Transport	(8) Light Manufactures	(9) Other Commodities	Total
1982	**I**	**-131**	**-35**	**-346**	**1104**	**-16**	**-424**	**283**	**-418**	**653**	**82**	**751**
	II	-504	-24	-540	1335	-8	-488	209	-582	836	91	325
	III	-459	7	-224	1288	-11	-387	117	-441	819	253	962
	IV	-175	16	-221	1302	5	-422	-194	-441	844	236	951
1983	**I**	**-233**	**14**	**-145**	**1027**	**6**	**-517**	**-155**	**-682**	**603**	**15**	**-67**
	II	-281	11	-21	1074	6	-462	-242	-592	761	333	587
	III	-15	16	-124	1361	4	-376	-577	-729	857	92	509
	IV	260	16	-276	1079	19	-573	-935	-758	791	181	-197
1984	**I**	**74**	**7**	**-54**	**1185**	**2**	**-599**	**-420**	**-761**	**811**	**12**	**257**
	II	218	12	175	1525	22	-662	-318	-1106	882	-220	528
	III	244	10	-28	1526	28	-716	-536	-1330	908	-294	-188
	IV	360	-36	-221	1597	10	-886	-1000	-2622	877	-125	-2045
1985	**I**	**284**	**-19**	**-62**	**1634**	**-6**	**-874**	**-1487**	**-2930**	**336**	**226**	**-2897**
	II	418	-21	-71	1704	-2	-816	-1952	-3633	322	189	-3862
	III	652	-17	-220	1670	36	-711	-2080	-3807	413	284	-3781
	IV	915	-42	-203	1958	-15	-722	-2050	-5390	514	251	-4785

NOTE: A negative sign represents net imports. Imports are CIF, Exports are FOB.

SOURCES: Official Chinese customs statistics. (J6cbx77t.c6f, DT)

Table 7-8
VOLUME OF MAJOR IMPORT COMMODITIES BY QUARTER *

		Total Cereals	Wheat	Synthetic Fibers: Raw	Synthetic Fibers: Spun	Chemical Fertilizers	Polyethylene	Iron and Steel	Timber	Equipment Sets	Motor Vehicles
1982	**I**	**3,500**	**2,940**	**104.88**	**37.73**	**1,342**	**77.87**	**654**	**630**	**655**	**3.88**
	II	4,320	3,430	61.76	35.27	1,626	90.95	843	1,370	657	4.54
	III	4,250	4,020	34.57	16.50	1,472	113.58	958	1,280	440	2.86
	IV	4,080	3,410	37.58	7.89	1,620	139.19	1,317	1,340	358	4.81
1983	**I**	**3,510**	**2,570**	**27.54**	**6.33**	**1,742**	**115.03**	**1,523**	**1,170**	**271**	**3.23**
	II	3,800	2,840	25.01	6.79	2,228	59.34	2,072	1,330	356	4.66
	III	3,480	3,130	22.73	8.65	1,737	99.61	2,646	1,680	374	6.71
	IV	2,730	2,570	58.34	28.39	2,289	152.95	3,385	2,130	289	10.56
1984	**I**	**2,950**	**2,830**	**49.81**	**37.87**	**1,932**	**139.09**	**2,690**	**1,820**	**265**	**11.14**
	II	2,340	2,230	55.97	36.84	2,036	165.89	2,706	1,760	448	11.77
	III	2,390	2,220	67.97	39.12	2,530	186.17	3,119	2,070	416	54.32
	IV	2,730	2,590	96.21	60.18	2,719	204.36	3,775	2,240	575	63.98
1985	**I**	**1,940**	**1,750**	**121.98**	**46.66**	**2,458**	**148.52**	**3,951**	**1,710**	**629**	**79.52**
	II	1,420	1,250	117.29	56.35	2,224	158.37	4,760	2,270	945	95.80
	III	1,183	1,080	129.41	79.55	1,676	171.02	5,480	2,690	1,111	87.07
	IV	1,430	1,290	121.00	117.76	1,252	262.60	5,833	3,030	1,806	91.59
1986	**I**	**1,845**	**N/A**	**85.78**	**67.77**	**663**	**N/A**	**3,820**	**1,906**	**N/A**	**37.32**

* NOTE: Timber is in thousand cubic meters, equipment sets are in million US $, Motor vehicles are in thousand units, all others are in thousand tons.

SOURCES: Chinese Official Customs statistics; 1986'I figures are from **China Economic News** (5/5/86, p. 10-11). (NOTE: In CEN, "iron and steel" is translated as "rolled steel.") (J6bcx78t.c6f, DT)

The data on imports by commodity in Table 7-8, above, follow more comprehensive trends in SITC category data. They show just how strong growth in investment goods, including machinery, transport equipment, and metals, was through the end of 1985. The dip in first quarter 1986 steel imports is probably not indicative of any change in the recent overall growth of producer good imports, rather it reflects the industrial slowdown engineered late in 1985 in an attempt to cool down an overheated, inflationary economy.

Grain imports were beginning to increase by late 1985 in response to 1984's poor harvest. It seems likely that grain and cereal imports will rise through the second quarter of 1986, possibly approaching 1983 levels. Following the rapid drawdown of foreign exchange reserves, the volume of consumer imports was cut drastically, as shown below in table 7-9, in an attempt to conserve foreign exchange. Imports of computers fell off to nearly zero, while television, radio recorder, and even vehicle imports were slowed. One factor driving the consumer import boom in mid- and late-1985 was a government attempt to soak up excess money supply. It is possible that government acquiescence in this matter, combined with increasingly decentralized control over foreign exchange, allowed this "one-shot" consumer import boom during late 1985--a boom that is not to be repeated again in 1986.

Table 7-9
MONTHLY IMPORTS OF MAJOR COMMODITIES, 1985-MARCH 1986

		Synthetic Fibres	Iron Ore	Steel	Copper	Aluminum	Zinc	Computers	Vehicles	Televisions	Radio Recorders
1985	**Jan**	**32.8**	**321**	**1097**	**52**	**11**	**23.0**	**1989**	**25.6**	**323**	**122**
	Feb	51.3	356	1389	26	30	20.0	2117	17.2	378	108
	Mar	39.9	538	1483	38	48	35.0	2098	36.0	362	120
	Apr	37.7	799	1318	34	28	30.0	2427	35.6	416	120
	May	37.7	792	1605	46	39	24.0	2062	28.9	424	127
	Jun	41.8	790	1785	28	34	17.0	3012	30.9	395	166
	Jul	40.2	1096	1922	22	29	23.0	917	33.0	399	141
	Aug	45.0	880	1841	22	41	14.0	1116	33.7	376	158
	Sep	43.9	974	1700	29	54	14.0	399	23.2	484	198
	Oct	41.3	643	1694	17	78	10.0	78	22.6	505	109
	Nov	30.3	843	1557	18	35	25.0	4	26.7	470	33
	Dec	34.5	1147	1844	19	42	19.0	76	24.1	326	63
1986	**Jan**	**20.4**	**422**	**1192**	**10**	**30**	**22.0**	**60**	**9.9**	**131**	**53**
	Feb	29.0	644	1467	27	23	19.0	2	14.6	145	31
	Mar	36.4	925	1154	17	12	17.0	12	12.9	159	75

UNITS: Metals and fibers in thousand tons, others in thousand units.
SOURCES: State Statistical Bureau, **Monthly Bulletin** (in Chinese), various issues. (j6bcx79t.c6f)

Exports strengthened measurably by end-year 1985 after a weak first three quarters, although they remain far behind imports. Petroleum exports grew in volume in the face of a softening world oil market. Coal exports jumped in the last quarter of 1985, a trend which has continued through the first quarter of 1986. Historically high cereal export levels were maintained through 1985, and remained high in the early months of this year. Another strong performer has been canned foods, an export item targeted for growth. Garments appear to have recovered their 1984 levels, after a very poor record in the first three quarters of 1985. Along with garments, exports of cotton yarn and fabric and polyester fabric have grown in late 1985. This can be traced to the bumper cotton harvest in 1985, which after a lag of several quarters is finally beginning to make its way to international markets. In general, exports in the first quarter of 1986 fared relatively well, and grew at a rate of 4.3% over first quarter 1985.

Table 7-10
VOLUME OF MAJOR EXPORT COMMODITIES BY QUARTER

		Total Cereals	Canned Food	Coal	Crude Petroleum	Refined Petroleum	Edible Oil Seeds	Cotton Yarn	Cotton Fabric	Polyester Fabric	Garments (mil. pieces)
		(Thousand tons)							(mil. meters)		
1981	I	220	85.5	1,500	2,640	920	104.97	10.03	289.0	92.7	78.1
	II	240	104.9	1,900	3,370	1,090	127.12	12.61	332.4	115.9	90.9
	III	160	91.4	1,720	3,920	1,380	44.52	10.94	320.1	114.0	104.6
	IV	**250**	**97.7**	**1,820**	**3,930**	**1,280**	**29.34**	**14.12**	**336.3**	**147.5**	**105.2**
1982	I	160	102.2	1,480	3,390	1,250	47.70	10.31	308.8	128.5	87.4
	II	220	85.7	1,690	3,880	1,140	59.91	12.12	276.6	133.2	101.3
	III	180	111.0	1,880	3,770	1,200	38.67	10.06	256.2	121.3	96.1
	IV	**240**	**109.7**	**1,670**	**3,640**	**1,320**	**49.93**	**16.15**	**347.9**	**174.2**	**120.5**
1983	I	250	97.0	1,500	3,070	1,130	83.68	13.48	293.5	126.1	99.5
	II	260	101.5	1,420	3,420	1,320	107.31	21.46	285.5	146.9	121.1
	III	270	105.4	2,080	4,630	1,280	87.03	37.84	361.0	182.9	115.0
	IV	**370**	**99.7**	**1,850**	**3,700**	**1,180**	**83.13**	**41.76**	**431.4**	**207.4**	**120.8**
1984	I	330	102.1	1,510	4,150	1,230	93.68	42.70	410.0	178.5	141.4
	II	640	107.3	1,820	5,590	1,500	111.86	39.84	446.5	186.2	141.2
	III	1000	101.0	1,820	5,700	1,550	74.47	39.39	443.3	163.2	126.7
	IV	**1220**	**92.2**	**1,810**	**6,570**	**1,370**	**56.39**	**45.49**	**432.8**	**192.0**	**144.5**
1985	I	1810	68.6	1,670	6,480	1,510	117.36	23.51	340.9	140.2	85.5
	II	2540	85.1	1,657	7,323	1,500	123.00	33.78	372.4	163.1	86.2
	III	2380	118.2	1,870	7,550	1,460	95.42	33.65	354.4	172.8	76.9
	IV	**2590**	**117.9**	**2,570**	**8,680**	**1,750**	**73.82**	**63.77**	**605.6**	**259.6**	**114.2**
1986	I	2054	78.2	2,135	5,779	1,101	N/A	30.33	395.9	183.7	103.2

NOTE: Units are in thousand tons except for fabrics which are in million meters and garments, which are in million pieces. Garment includes only non-knitted.

SOURCES: Official Chinese Customs statistics; 1986'I figures from **China Economic News** (5/5/86, p. 10-11). (NOTE: 1986'I garment figure calculated from growth rate, which differs from given flow.) (j6bcx80t.c6f)

Japan remains the major exporter to China despite a slight decline in the first quarter of 1986. Data in Table 7-11 illustrate the scale of China's increased reliance on its major trading partner, quarter-by-quarter from 1983 to 1985. By comparison, China's other trading partners seem to have gained only marginally, with the exception of Singapore (and the other ASEAN nations) which has registered an increasingly large deficit, and West Germany which has developed a strong and growing surplus.

Japan's net exports to China grew from very low levels in 1983 and early 1984 to more than 3 billion dollars by end-year 1984 and more than 8 billion dollars in 1985. For the United States, net exports in 1985 were 2.5 billion, more than double the total recorded in 1984. China's foreign exchange earnings from Hong Kong fell substantially in 1985.

Table 7-11
NET EXPORTS BY PARTNER COUNTRY, 1981-1985
(Million US Dollars)

Year/Qtr	Total	Japan	United States	Canada	West Germany	USSR	Singapore	Hong* Kong	Other
1981*	439	-349	-671	-218	-75	-8	139	1,008	613
1982*	**1,150**	**227**	**-525**	**-238**	**-12**	**-25**	**134**	**969**	**620**
1983 I	505	128	-379	-262	-39	-41	139	838	122
II	1,204	-216	-219	-303	-6	-33	95	1,004	882
III	1,194	-435	56	-300	-70	12	98	1,084	748
IV	**603**	**-542**	**-281**	**-357**	**-54**	**-61**	**129**	**1,154**	**614**
1984 I	888	-197	-300	-185	-58	-57	181	999	505
II	1,292	-460	-17	-161	-93	35	196	1,050	743
III	630	-697	-197	-173	-37	-10	308	917	519
IV	**-907**	**-1,647**	**-661**	**-190**	**-121**	**-57**	**391**	**789**	**589**
1985 I	-2,039	-1,521	-666	-296	-250	-12	369	374	-36
II	-2,850	-2,267	-718	-181	-361	-18	475	408	-188
III	-2,724	-2,426	-426	-209	-408	47	446	670	-418
IV	**-3,440**	**-1,975**	**-699**	**-207**	**-499**	**2**	**523**	**442**	**-1028**

*Average Quarterly Net Exports.
NOTE: Exports FOB, Imports FOB.
SOURCES: 1983 I - 1985 IV: **China's Customs Statistics**, various issues, 1984-86. (j6bcx81t.c6f)

China's deficit with Japan accounts for a full three-quarters of the total 1985 deficit, and within Japan's trade, machinery and equipment again account for almost all of the total shortfall. China's 1985 trade preference for Japan is shown very clearly in Table 7-12, below, which gives one-digit SITC trade with each of China's major trading partners for both the average 1985 quarter and third quarter 1985 net exports. The first column to the left shows the overall pattern clearly. Net imports of Machinery and Transport (SITC 7) more than account for the total trade deficit.

It is particularly interesting to see the growing degree to which Japan's trade position with China overshadows that of the United States. Japan's net earnings from machinery and transport sales averaged over five times those of the United States in the first three quarters of 1985. When it is remembered that a significant portion of Hong Kong's net exports to China also originated in Japan, Japan's dominance of SITC 7 is even more impressive. In most categories Japan's net exports are more than twice those of the United States, and in the important telecommunications market, United States sales are dwarfed by Japan's (see table 7-13, below, on page 7- for two digit SITC imports and exports).

This contrast in trade patterns between Japan and North America reflects a more long-run difference. Data on China's imports in Table 7-11, above, show that Japan's sales fell much more sharply in the 1982 cutback than those of the U.S. and Canada, just as they are surged more rapidly now, as import restrictions have been eased. In turn, with the recent tightening of foreign exchange and overall import policy, Japan's quarterly surplus has begun to decrease slightly. Total trade in the first quarter of 1986 between the two countries has decreased 13 percent over the first quarter of 1985. This figure implies a continued slide in the dollar value of tne deficit.

Examination of net exports by partner country at the one-digit level reveals where most of the competition is. Japan's strengths are in metals and machinery, while North America has done well in foods, timber, and chemicals. The strength of Japan's trade position, however, is emphasized by data on net exports at the two-digit level of SITC detail. (For details, see Table 7-13.) Overall, China makes money on mineral fuels and light manufactures (mostly apparel) and spends it on chemicals, metals, and machinery. The materials, metals and machinery come overwhelmingly from Japan, while the U.S. and Canada have some advantage in supplying chemicals.

For food and crude materials, Japan does not really compete with North American suppliers. There is, however, strong competition in SITC category 7 (machinery and transport equipment), and Table 7-12 shows clearly how much more successful Japan has been in making money from this class of commodities. Japanese net exports were more than triple those from the U.S. and far greater than those from any of China's other trading partners. West Germany has, however, made significant, consistently increasing inroads into this market. In general, competition for sales to China is concentrated in SITC categories 5, 6, and 7 (chemicals, materials and metals, machinery and transport). Canada, West Germany, and even the USSR show significant net exports to China for these goods.

Sino-Soviet trade has grown significantly through all four quarters of 1985, and during the first quarter of 1986. Table 7-12 highlights the rapid growth of third quarter trade over average quarterly trade for the first three quarters of last year. China has taken advantage of relatively open borders in Xinjiang and Heilongjiang provinces to increase exports of food and light manufactures, while the Soviet Union is exporting producer goods and certain consumer manufactures to China. Producer good exports include chemical fertilizers, electrical machinery, and transport equipment; consumer goods are mainly appliances such as refrigerators which are priced far enough below Japanese products so as to overcome the quality differential. In addition to trade with the Soviet Union, China is also moving to increase trade with East European countries, especially Hungary and Rumania.

Table 7-12
1985 AVERAGE QUARTERLY NET EXPORTS
1985'I-III Only
(Million US Dollars)

SITC Code	Total	Japan	United States	Canada	West Germany	USSR	Singapore	Hong Kong	Other
Total Net Exports	-3451	-2075	-602	-228	-341	6	430	486	-1128
(0) Food and Animals	453	165	-15	-101	18	75	33	270	7
(1) Beverages and Tobacco	-19	0	-14	0	0	0	1	2	-10
(2) Crude Materials	-120	97	-173	-53	31	35	0	103	-159
(3) Mineral Fuels	1660	802	155	0	0	0	387	70	246
(4) Fats and Oils	10	4	-2	0	0	3	-3	3	6
(5) Chemicals	-792	-143	-247	-27	-46	-42	-9	31	-309
(6) Materials and Metals	-1784	-954	0	-60	-119	-47	24	212	-840
(7) Machinery and Transport	-3447	-1989	-394	-13	-250	-44	-8	-296	-453
(8) Light Manufactures	356	-36	83	28	22	25	6	80	147
(9) Other Commodities	233	-20	4	0	1	0	0	10	239

SOURCES: **China's Customs Statistics**, 1985 issues.

Table 7-13
THIRD QUARTER 1985 SITC ONE-DIGIT NET EXPORTS BY TRADING PARTNER
(Million US Dollars)

SITC Code	Category	Total	Japan	United States	Canada	West Germany	USSR	Singapore	Hong Kong	Other
Total		-3816	-2427	-426	-209	-408	46	446	670	-1509
(0)	Food and Animals	658	173	11	-69	20	177	38	285	23
(1)	Beverages and Tobacco	-17	0	-14	0	0	0	0	8	-12
(2)	Crude Materials	-222	98	-215	-59	39	-1	-2	125	-208
(3)	Mineral Fuels	1685	775	170	0	0	0	394	64	282
(4)	Fats and Oils	36	4	0	0	0	0	-5	4	33
(5)	Chemicals	-718	-162	-200	-31	-32	-49	-8	34	-270
(6)	Materials and Metals	-2099	-1065	163	-49	-133	-42	31	248	-1253
(7)	Machinery and Transport	-3842	-2182	-415	-24	-333	-77	-10	-230	-570
(8)	Light Manufactures	417	-45	70	24	31	30	6	119	182
(9)	Other Commodities	286	-24	5	0	0	0	0	12	293

SOURCES: Calculated from **China's Customs Statistics**, 1985 III and 1985 IV, Economic Information and Agency (sic).

For Singapore and Hong Kong, however, the pattern is markedly different. Hong Kong and Southeast Asia have traditionally been net foreign exchange earning markets for China, and Table 7-12 above shows that in addition to light manufactures, China provides them with foods, fuels, and semi-finished materials. Both remain a reexport base for manufactured goods produced in Japan, and, increasingly, in Taiwan and South Korea.

At the two-digit level, Table 7-13 shows how much Japan commanded China's third quarter 1985 net imports of electrical machinery, office and data processing equipment, telecommunications systems, and road vehicles. Japan's net earnings from electrical machinery sales continue to more than double those for West Germany and the United States, a trend established as early as 1984. In telecommunications equipment and road vehicles, Japan's sales dwarfed those by all other competitors. Only in office and data processing equipment did the United States approach Japan's level of performance. Even plastics and textile yarns imports are dominated by Japan. Since these are all areas in which continued investment imports are expected to be concentrated, Japan's 1984 strength, which continued well into 1985, appears to have established trade patterns for the near future.

A final trend which has received little attention but is very important to China's overall trade position is devaluation. September 1985 saw the beginning of a gradual devaluation of the yuan in what appeared to be the first significant deviation in nearly five years from the de-facto exchange rate (internal settlement rate) of 2.8 yuan/dollar. By March 1986, the yuan had been devalued by 15 percent to 3.22 yuan per dollar.

This devaluation has been even more pronounced vis-a-vis the Japanese yen. While the Chinese at one time maintained that the yuan's value relative to any single currency was determined by a weighted average of several major world currencies, the almost constant yuan-dollar rate since late 1985 (during which time the yen in particular has revalued so strongly) confirms that the Chinese leadership has tied the yuan to the dollar and decided to allow the yuan to devalue with respect to the yen. In fact, gradual devaluation began in April of last year and continued through September, during which time the yuan lost 10 percent of its value. From September 1985 to February of this year the yuan lost an additional 30 percent, resulting in an overall devaluation of nearly 40 percent in less than a year (from 91 yen/yuan in March 1985 to 57 yen/yuan in February 1986).

POLICY

In early 1986, China announced in the Seventh Five-Year Plan (1986-1990) a continued commitment to domestic development and increased international economic relations. Technology imports are seen as necessary for the achievement of China's long-term modernization goals, and exports are necessary to pay for these imports. The dollar value of total trade is to be increased at a rate of 7 percent per year, with export growth (8.1 percent per annum) to exceed import growth (6.1 percent). Zheng Tuobin, minister of Foreign Economic Relations and Trade, recently announced that foreign currency to be spent on technology imports will amount to only 10 to 12 percent of China's foreign currency expenditures during the plan period, implying that much of the foreign exchange China earns in the coming years will be plowed back into export-oriented industries.

Witnin this framework, China's long term trade policy indicates a strong linkage between its imports and the receptivity of foreign markets to its exports, a policy dictated in large part by foreign exchange needs. Urban enterprise reforms enacted in late 1984 and early 1985 appeared to have relaxed the linkage somewhat by decentralizing trade and borrowing decisions. However, given the import growth and rapid drawdown of foreign exchange reserves in late 1985, the State has been forced to implement a fundamental trade policy shift. To counter explosive imports, the state has strengthened the role of the banking system and has imposed commodity-specific import controls on consumer goods. In March of this year the Ministry of Foreign Economic Relations and Trade (MOFERT) raised the number of items requiring import permits from 30 to 45, adding commodities such as rubber, steel, fertilizers, and pesticides to the list, which contains mostly manufactured goods and assembly lines to produce those goods. China has maintained a commitment to preserve currency strength and stability by avoiding currency devaluation, but devaluation is apparently now unavoidable.

Many factors point to a policy linking bilateral exports and imports. The degree of trade linkage varies from country to country. At one extreme, Sino-Soviet trade is close to pure barter. Under a pact announced last year the Soviets were to supply machinery, transport equipment and chemicals, and invest in building and modernizing 24 industrial plants in return for agricultural and industrial raw materials and consumer goods from China. The United States trade relationship is based much less on such barter agreements. However, when the United States has imposed new limits on textile imports, China has countered by cutting back on agricultural imports from the United States.

Japan, with its massive exports of machinery to China in 1985, upset what may have been the clearest example of this linkage. In 1984 and early 1985 China was trading crude oil for Japanese steel of equal value. This formed a basis for the Sino-Japanese trade relationship. Explosive growth in machinery and transport equipment exports to China, combined with the above-mentioned yen/yuan revaluation, knocked this relationship seriously out of balance. In the wake of very large deficits in 1985, China has attempted to reduce the volume of imports from Japan by cutting consumer imports and non-essential producer good imports. However, the deficit remains large, perhaps politically untenably so. To regain some element of balance in its trade relationship with Japan China appears likely to shift its import focus to other OECD nations, especially those in the EEC such as West Germany and Great Britain, and, increasingly, the Soviet Union and Eastern Bloc nations.

One area where China has moved away from this evolving bilateral framework is in its trade relations with the Third World. As China has opened to the West in search of technology during the 1980s, traditional economic and political alliances with developing nations in Africa and Southeast Asia have become less pronounced. In their drive to export a relatively underdeveloped product mix, the Chinese have had to compete more directly with other developing nations. To gain an advantage China has begun to experiment with flexible payment arrangements such as countertrade, including barter, buyback, counterpurchase, and compensation trade agreements, as well as with international financial instruments such as International Trading Certificates (ITCs). While these developments are primarily aimed at decreasing foreign exchange outflows, creative financing has allowed China to compete more effectively in trade at the margin of profitability.

Table 7-14
SELECTED SITC 2-DIGIT EXPORTS AND IMPORTS
Third Quarter 1985
(Million US Dollars)

SITC Code	Japan	United States	Canada	West Germany	USSR	Singapore	Hong Kong	Other
EXPORTS								
(04) Cereals	257	0	0	2	84	36	148	218
(05) Vegetables & Fruit	98	39	24	42	3	19	153	123
(22) Oilseeds	115	0	0	6	101	7	27	149
(26) Textile Fibers	195	8	0	48	36	9	182	320
(32) Coal & Coke	117	0	0	0	0	0	31	80
(33) Petroleum	2299	474	0	0	0	1167	186	703
(65) Textile Yarns, Fabrics	276	174	33	67	93	58	849	572
(69) Metal Manufactures	3	43	4	14	2	11	63	145
(84) Apparel	264	405	76	85	59	7	163	327
(89) Misc. Manufactures	57	75	7	32	9	12	203	178
IMPORTS								
(26) Textile Fibers	142	116	2	17	0	0	14	558
(56) Chemical Fertilizer	16	410	51	29	127	0	0	643
(58) Plastics, etc.	268	208	28	61	3	40	28	299
(65) Textile Yarns, Fabrics	209	105	0	17	0	0	234	490
(67) Iron & Steel	2634	19	0	384	163	13	35	1783
(68) Non-ferrous Metals	107	79	151	25	54	4	55	728
(72) Electrical Machinery	1150	483	5	382	14	12	219	706
(76) Telecom. Equip.	1366	43	8	31	0	12	291	64
(78) Road Vehicles	1773	26	9	65	82	0	14	307
(79) Other Transport	233	233	15	170	39	0	9	273

Sources: **China's Customs Statistics.**

The trade deficit and, correspondingly, China's trade policy cannot be isolated from other developments in China's domestic economy. The industrial reforms implemented in the last eighteen months have encouraged enterprises to pursue profit rather than fulfill planned foreign exchange goals. Therefore, enterprises which faced better domestic prices for their goods than the world market price cut back on exports, while others were able to take advantage of the strong demand for consumer durables such as vehicles and televisions by increasing imports. These trends have continued to some degree, but recent policy measures have begun to address the problems.

Control over decisions to commit foreign exchange have been tightened in response to the rapid drain on hard currency funds throughout 1985. As early as July 1985, a regulatory tax was placed on imports of motor vehicles, computers, and video-cassette recorders, among other manufactured goods. Late in the year more severe controls on the importation of consumer goods were reported. Shipments of goods ordered, but not yet paid for, were left on docks in Hong Kong and Shanghai. Profiteers and other "economic criminals" were attacked in the press. The border between Guangzhou Province and the

Shenzhen Special Economic Zone has been closed to limit commodity and currency trafficking. These measures have brought about a drastic reduction in consumer goods imports, but the fundamental problem of a commodity trade deficit has continued because of the overwhelmingly large expense embodied in producer good imports.

Export growth is the only way Peking can continue to foot the bill for the economic transformation currently underway in China. One way the government has tried to improve the export abilities of domestic enterprises is the above-mentioned devaluation of the Yuan against both the dollar and the Yen. Continued gradual devaluation appears to be one of the major policies aimed at supporting export growth. Domestic price reforms enacted late in 1985 should also improve enterprise managers' information and decision-making capabilities.

More direct measures have included the designation of certain enterprises as "export-oriented" enterprises, which gives them priority in credit allocation, funding, technology distribution, and equipment acquisition. Many of these enterprises produce light manufactures with a higher value-added than China's current export mainstay, raw and semi-finished materials.

As a supplement to earning foreign exchange, China has recently shown a much greater willingness to borrow internationally to cover the current account deficit and maintain foreign exchange reserves than it did in the early 1980s. International lending to China was substantial in 1985, much of it in the form of short-term credits which will require relatively early refinancing. The large positive net lending figure appearing in Table 7-3, China's summary balance of payments, indicates that the various managers of foreign exchange and foreign debt throughout the government may have temporarily lost track of China's capital account.

Although some Chinese sources have informally indicated a willingness to borrow as much as 40 billion U.S. dollars in the new Five Year Plan period (1986-90), Chinese policy in this area is not clearly stated and appears to be in flux.

PROBLEMS

China's foreign trade and payments, the acquisition and use of foreign exchange, face a host of problems, some standard for a poor developing country and others unique to China. Like so many poor countries, China has difficulty disciplining imports, has an overvalued currency, and faces protectionism for standard manufactured exports. Like oil-exporting countries everywhere, China since early 1986 has had to face the added problem of sharply dropping world oil prices and rapidly declining oil revenues, once considered so dependable.

But problems unique to China present perhaps the greater challenge. There is a strong contradiction between China's economic reforms and the need to earn and conserve foreign exchange. On the import side, the reforms seek to make enterprise managers more independent from government control. On the export side, this same independence has made plants reluctant to export, given the unrealistically more attractive domestic pricing. The major problem is that solutions to these problems require not just one policy step, but a coordinated combination of policies, and this need for coordination between trade and reform policies may be the biggest challenge of all.

Export incentive problems remain difficult, in large part because China's domestic prices are so out-of-line with international prices that domestic firms, which keep their books in yuan, find it more profitable to sell manufactures domestically than abroad at the current exchange rate of 3.22 yuan/dollar. Before the reforms, the foreign trade corporations (FTCs), motivated to earn foreign exchange, had been willing to take domestic yuan losses on some products to earn dollars. They made up the losses on exports of other products as well as imports of goods which brought significant yuan profits. The post-reform decentralized system, however, gives no such compensation, and so exports of many light manufactured goods have faltered seriously. In the meantime, individual firms have been encouraged to export directly, and the role of the traditionally powerful FTCs has been significantly weakened.

Price reforms enacted in early 1986, in part through inflationary changes of relative price levels of various commodities, have not had any great effect on exports. This is because inflationary price rises of some commodities have not been met with price decreases of others; when domestic prices rise there is even less incentive for enterprises to expend extra effort marketing their products internationally. Unless inflationary price adjustments are met with currency devaluation, decentralized incentive changes encouraging enterprises to export will have limited effectiveness.

Recently publicized black market operations have been run at rates as high as 5.0 and 5.4 yuan/dollar. The solution to China's currency valuation problem requires adjustment of over-inflated domestic retail prices for those manufactures on the one hand, and a further devaluation of the exchange rate on the other. However, a policy of more mini-devaluations, because of the expectations for further devaluations it creates, could exacerbate the short-term trade deficit, under-representing China's long-run trade strengths. If continued gradual devaluation seemed likely, importers would step up their orders in an attempt to get delivery and payment settlements as quickly as possible. Conversely, exporters would delay accepting orders and payments if they thought they could soon get better terms with a continually weakening yuan.

Not only are export incentives weak, but world market conditions for China's exports also have become increasingly difficult. Recent declines in oil prices have had a significant negative impact on China's foreign trade and payments situation. Zheng Tuobin, minister of Foreign Economic Relations and Trade, has estimated that for every one dollar fall in the price of a barrel of crude oil China loses more than 200 million dollars. Given the 10 dollar per barrel decline registered over the first quarter of 1986, Chinese hard currency earnings have dropped by more than 2 billion dollars. If exports of other commodities cannot make up lost oil revenues, China will have to cut imports or borrow on world financial markets.

Falling oil earnings place new importance on China's manufactured exports, just as they face strengthening protectionism in a slowly growing world economy. For China, this problem is more serious than for any other poor country because of the potential scale of China's export drive. It was relatively easy for the United States to absorb imports from Taiwan and South Korea during the 1960s economic boom. U.S. imports from China on a comparable scale, more than twenty times as great, is not a practical consideration. In this sense, China's export marketing problem is a more general problem for the maturing world economy: how to absorb output from the emerging industrial capacity of much of the developing world without triggering trade wars damaging to all.

PROSPECTS

The prospects for China's foreign trade and payments indicate that 1986 and 1987 will see some success in controlling the recent current account deficits through both recentralized export promotion and moderate controls on imports. At the same time, relatively large short-term borrowings, many in the form of merchandise credits, will be converted to longer-term obligations.

Perhaps the single most striking trend will be the growth of manufactured exports to make up for lost petroleum revenues and to pay for imports of producer goods, which will continue on a large scale. The growth in manufactured exports will be driven by a recentralization of export promotion, including the reinstatement of many subsidy mechanisms needed to counterbalance disincentives wrought by domestic price irrationalities. In addition, China will use direct bilateral negotiations with major trading partners such as Japan and Brazil to ensure that Chinese purchases of imports are matched to a significant degree by foreign purchases of exports. Given the degree of central control over imports still enjoyed by Peking this strategy will in large part be successful.

Although China will thus correct the exaggerated current account deficits of the late-1984 to early-1986 period, the reinstitution of direct controls will not signal a major contraction of imports and a renewed build-up of foreign exchange reserves similar to that of 1981-84. Chinese foreign economic trends will instead reflect the changing conditions in China's domestic economy, which have made importation of foreign technology and materials more efficient and more directly supportive of export earnings. As indicated in the macroeconomic projections found in Tables 2-7 and 2-8 in Chapter 2, China will most likely have only a mild current account deficit if any at all, as foreign debt is limited to a conservative debt service ratio.

Reform of the foreign exchange system is likely to continue. In response to the greatly increased need for foreign exchange in the market-oriented economy, systemic changes would deal with retention of foreign exchange by export businesses, the level of State foreign exchange reserves, and the exchange rate.

The yuan may be devalued to 3.5 or 4.0 yuan/dollar by 1987. Indeed, eventual abolition of foreign exchange certificates might be used as a cover to shift to a different exchange rate vis-a-vis the Renminbi, given domestic political opposition to "weakening" the national currency.

In sum, it is likely that in the next five years China will be able to expand exports rapidly, especially in light manufactures such as garments and processed foods. As a result of this expected growth, import levels will also remain high, especially for producer goods. As a result of the likely commodity trade deficit and the level of foreign exchange reserves already considered low, foreign borrowing, both subsidized and at commercial rates, will also continue. But invisible receipts, which have grown steadily over the last two years, will have an important moderating effect on borrowing needs.

CHAPTER EIGHT -- Agriculture

EXECUTIVE SUMMARY

TRENDS

* The 1985 decline in crop output is associated with bad weather and incentive reforms. Long-term rapid growth is a better indicator of current trends.
* Other farm sectors have continued to grow rapidly in 1985.

POLICY

* Special steps to stimulate grain output target different areas with varied prices, often higher, than in 1985.
* In some areas, fertilizer and diesel fuel are given to encourage grain output.
* Numerous 1986 policy steps strengthen individual incentives but involve indirect government manipulation.

PROBLEMS

* Grain supply to deficit areas, especially cities, is China's most fundamental agricultural problem.
* Fertilizer shortages, low quality levels, and high prices reflect the general low level of fertilizer industry development.

PROSPECTS

* 1986 crop output will recover strongly and animal husbandry will continue its rapid growth.
* Grain output will rise only moderately, in spite of new prices.

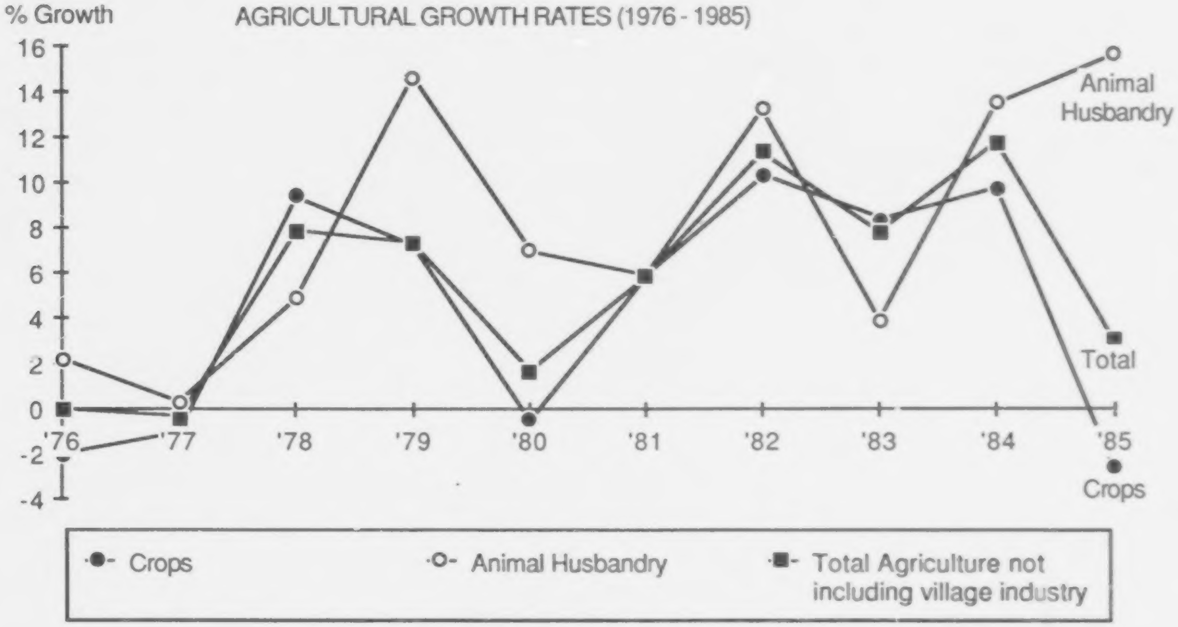
TRENDS

The two most important trends in China's agricultural economy have been the high rates of long-term output growth, in spite of the 1985 slowdown, and the continued unfolding of rural reforms in a "phase two" stage emphasizing commercialization of the rural economy. Together these two dimensions represent sweeping changes in China's agriculture since Mao's death, changes which have transformed the rural economy from a collectivized system of communal farms to a decentralized system of owner-tilled land. The two major trends, output growth and continued reform, are closely related: incentives introduced by reforms are a major reason for the output growth, and output growth has been regarded as proof of reform success, justifying further reforms.

The pattern of new reforms bringing new output success was interrupted in 1985, however, after four years of rapid growth. Causes of slower growth in agricultural output during 1985 (3 percent -- see Table 8-1) were: bad weather, the introduction of new reforms, especially a contract purchase system for grain with lower prices, and the breakup of state farms in the Northeast, one of China's major grain centers. The degree of recovery from the 1985 slowdown will not be known until the end of 1986 or early in 1987, as most of China's crops are harvested late in the year.

There were sufficient anomalies during the 1985 crop year, especially droughts and typhoon flooding, that its record can be discounted as a sign of long-term trends in China's agricultural output. Long-term trends are better represented by growth patterns since the late 1970s, when major reforms were first implemented. Crop output growth, traditionally the slowest of all agricultural sectors, was greater than 8 percent in 1984 for the third consecutive year. Except for 1980, which was also a year of severe droughts and floods, crop output growth did not fall significantly below 6 percent per annum in any year between 1977 and 1984 (see Table 8-1, below).

Diagram 8-1


AGRICULTURAL GROWTH RATES (1976 - 1985)

This long-term pattern of output success has been due to a combination of favorable weather and early rural reforms. Rural reforms, in turn, have two major components: privatization of assets in nearly all agricultural sectors and rapid commercialization of rural economic life. Reforms have introduced incentives for farm households to specialize production, to increase the use of markets, and to gradually adopt better methods, whether technical, such as vinyl greenhousing, or managerial, as reflected by shifts in cropping and output patterns.

Of the rural reforms by far the most fundamental has been rural land tenure reform, which after 25 years of communal organization redistributed land to individual farmers. Farmers in private conversation no longer call the program the "individual responsibility system," as it is officially known, but rather the "individual ownership system." China's agriculture is now essentially private owner-tiller agriculture, and what is more, owner-tiller agriculture with, by poor-country standards, remarkably egalitarian distribution of land, herds, and other assets. This relatively egalitarian distribution of productive assets implies relatively equal incomes, with profound implications for the nature of China's future economic growth and related social development.

Rural output as discussed above does not include village industry (sometimes called brigade industry). As traditionally measured by Chinese statisticians, however, the overall growth in agricultural value reflects not only growth in traditional sectors, but also the growing significance of village industry, which has averaged annual growth of 22.2 percent over the past 13 years. This sector now contributes more to the gross value of agriculture than animal husbandry, making it the second largest component in agricultural output value.

Precisely because of the rapidly growing output value of village industry, Chinese statisticians have begun to classify it as part of industrial output rather than agricultural output. Furthermore, the overall significance of village industry has been brought into question by recently published statistics implying that only a very small part of the gross output (roughly 5 percent) is actually value added. In other words, even though total turnover is very high, actual increase in value, and hence actual employment, is low. Growth in rural employment may be greater in the rural service sectors than in village industry, but statistical evidence is not available.

Table 8-1
GROSS AGRICULTURAL GROWTH AND OUTPUT VALUE, 1976-85

	Crops	Forestry	Animal Husbandry	Fishery	Village Industry	Other Sidelines	Total Agriculture	Total without Village Industry
Growth (Percent)								
1976	-2.0	15.6	2.2	1.0	44.8	12.5	2.2	.0
1977	-1.0	-1.9	.3	5.2	23.2	7.2	1.3	-.4
1978	9.4	5.5	4.9	.0	15.4	2.2	8.5	7.9
1979	7.2	1.4	14.6	-3.4	16.4	-3.5	8.1	7.3
1980	-.5	12.2	7.0	7.6	21.3	-7.1	3.0	1.1
1981	5.9	4.1	5.9	4.4	12.2	24.0	7.1	6.5
1982	10.3	8.5	13.2	12.3	9.7	21.9	11.1	11.3
1983	8.3	10.2	3.9	8.6	23.3	11.6	9.6	7.8
1984	9.9	19.0	13.4	17.6	53.4	34.3	17.7	12.3
1985	-1.9	3.6	15.6	17.2	62.2	18.9	13.1	3.0
(billion 1980 Yuan)								
1985	193.00	14.5	55.5	6.8	93.5	20.6	383.8	290.3

SOURCES: State Statistical Bureau, **Tongji**, 5/86, p.44 and **1985 China Statistical Yearbook**; (J6BCA01S.N6F).

Table 8-1, above, shows the sustained growth in virtually every agricultural sector through 1984 and the slowdown in 1985 brought about almost entirely by the reduction in crop output, which accounts for 70 percent of all output. The pace of output growth from 1980 to 1984 was particularly impressive. At the same time, very rapid growth in village industry is shown to have had a major influence on agricultural growth rates as traditionally measured, with the exception of 1982, when official restrictions slowed light industrial growth. The difference in output with and without village industry can be seen in the two right-hand columns of Table 8-1.

The major source of output value in China's agriculture is crop output, and the principal components of the 2 percent decline in 1985 are seen clearly in Table 8-2, below. Grain output fell 7 percent and cotton output was down 34 percent. The decline in grain output is particularly significant, not only because grain is the single largest component in crop output, but also because grain production was such a central feature of Maoist China's agricultural policy. Success or failure of any year's grain crop was traditionally interpreted as proof of success or failure for the overall agricultural record. Grain output in 1985 was given special prominence in a September 1985 speech by Chen Yun, patriarch of Chinese economic theory. Chen Yun's cautions not to neglect grain have been taken by some observers to be a veiled expression of his dissatisfaction with the entire reform program.

Given the importance of grain, both economically and politically, it is useful to note that the sharp 1985 decline was caused by a combination of three factors: first, poor weather in different parts of China, especially in the northeast, second, the introduction of a variety of reforms over the years with direct significance for grain, and third, the very high output growth recorded in 1982-84, in comparison with which almost any normal 1985 growth record would have appeared unimpressive.

Although weather statistics are not available in any easily usable form, clear reports in mid-1985 of severe drought in the Northeast grain basin, followed by successive typhoons and flooding and the ruination of large sections of planted cropland, must be given some weight in an explanation of output declines. Provincial data on output show that the production decline in several of these major grain-producing provinces was as much as 33 percent. At the same time, however, many Chinese observers also point to the contract procurement system and other reforms related to grain as bearing heavy responsibility for the decline.

Table 8-2
GROWTH OF MAJOR AGRICULTURAL COMMODITIES, 1980-85

	Grain	Cotton	Oil Seeds	Sugar Crops	Jute & Hemp	Meat	Milk
(Percent Growth)							
1980	-3.5	22.7	19.5	18.3	0.8	13.5	-
1981	1.4	9.6	32.7	23.8	14.8	4.6	13.1
1982	9.1	21.2	15.8	21.0	-15.9	7.1	25.3
1983	9.2	28.9	-10.7	-7.5	-3.9	3.8	14.0
1984	5.2	35.0	12.9	26.3	46.4	9.9	18.9
1985	-7.0	-33.7	32.5	26.3	127.8	13.9	14.4
(Million Tons)							
1985	379	4.2	15.8	60.4	3.4	17.6	2.5

SOURCES: State Statistical Bureau, March Communique on 1985 plan fulfillment and **1985 China Statistical Yearbook**.

The most-often cited and most fundamental 1985 reform affecting grain was the implementation of "phase two" of China's rural reforms, shifting strongly away from direct government procurements, as under the old planning system, toward commercialized grain purchases by contract. Because the contracts effectively lowered the price of grain from its high 1984 levels, and because in many areas the usual state delivery of fertilizer at low or no cost was also suspended, many farmers chose not to plant as much grain and not to use as much fertilizer in dressing the crops they did plant. When forced to pay high prices for mediocre-quality fertilizer, many farmers apparently decided that the increased value output was not justification for increased purchases. As a result, this major step forward in the commercialization of China's grain sector was also a significant reason for the 1985 output decline.

A second reform program, however, also may have had some influence. "Phase one" of the rural reforms, begun in 1979, transferred most of China's farmland to individual family care. However, State farms under direct control of the Ministry of Agriculture were largely exempt from decollectivization. It is now clear that 1985 saw the extension of the land reform even to state farms, with most of state farm land broken into family holdings. Much of the grain basin in the Northeast, which is relatively sparsely populated, was organized into state farms; it is possible that the 1985 ownership transfer had a transitionally negative effect on land planted to grain and on its cultivation.

Table 8-3
OUTPUT OF ANIMAL HUSBANDRY PRODUCTS, 1980-85
(Percent Growth)

Year	Pork	Beef	Mutton	Pork, Beef, Mutton	Eggs	Milk
1980	13.2	17.4	17.1	13.5	--	6.6
1981	4.8	-8.0	7.0	4.6	--	13.1
1982	7.0	6.9	10.1	7.1	--	25.4
1983	3.5	18.6	4.0	3.8	18.3	14.0
1984	9.8	21.2	5.3	9.9	32.4	19.8
1985	n/a	n/a	n/a	14.0	21.6	30.8
1984/85* Output:						
thousand tons	14,451	382	573	17,553	5,350	2,890
kg per capita	14.0	.37	.55	16.9	5.2	2.8

* NOTE: Individual pork, beef and mutton data are from 1984, while the total for all three meats and data for eggs and milk are for 1985.
SOURCES: State Statistical Bureau, **Tongji**, 5/86, p. 44; (J5CH01T.R5H).

Finally, it is interesting to note that the decline in grain output may actually have been desirable, given the very large harvest in 1984 and the State's inability to store and preserve it. Until commercial relations between grain surplus and deficit regions are more mature, there should be some doubt about the wisdom of pressing for larger grain harvests in provinces with no additional storage facilities. In this sense, the 1985 grain output decline could be viewed as a successful experiment in the use of prices to manipulate the structure of crop output. The fact that all crop output declined, however, adds credence to the argument that weather was important, because the reforms by themselves would have resulted in a shift of land to crops other than grain, virtually all of which have higher value yields than grain, increasing total crop output accordingly. Putting such hypothetical questions aside, however, the political significance of grain output has apparently overshadowed its moderate economic significance, and the performance of grain in 1986 will be watched very carefully.

Discounting the 1985 record because of these many circumstances, the importance of the long-term growth record needs to be stressed. Although crop diversification is the main cause of the strong long-run growth record, animal husbandry also plays a central role in the rural economy, and, except for village industry, is by far the largest non-crop subsector of agriculture. Growing 12 percent in 1984 and 16 percent in 1985, animal husbandry recovered from its slow growth in 1983, which was due largely to low pork prices and a shift of farm resources, especially in the easternmost provinces, into other activities. Although statistics on individual meat output trends are unavailable, all meat output in 1985 grew a very strong 14 percent, while egg output was up 22 percent and milk output up 31 percent. These are very strong records, especially in light of the high growth for the same sectors recorded in 1984.

In animal husbandry, output and investment patterns have shifted away from the pastoral regions of China to suburban farms and enterprises. This is particularly true for the dairy industry and the production of whole milk, of which there is a chronic shortage in all urban areas. Urban milk output has grown faster than output in other parts of China (for 1983, 19.5 percent as opposed to 14 percent nationwide). At the same time, meat demand has come to emphasize higher quality cuts of meat and lean meat. Fatty pork is reportedly very difficult to sell and there have been complaints that some cities are requiring that meat coupons be redeemed for fatty pork in spite of its low popularity. Both of these trends, emphasis on urban-based dairy and high-quality feed-lot meat production, represent a major shift in animal husbandry technology with important implications not only for consumption patterns, but also for feed grain demand.

Table 8-4
OUTPUT OF PORK, BEEF, AND MUTTON BY MAJOR WORLD PRODUCERS, 1982-85

	1982	1983	1985 Output	
	(Percent Growth)		(mil. tons)	(kilo/ person)
CHINA	7.1	3.8	14.0	13.8
Argentina	-10.8	-11.7	2.6	88.9
Australia	1.8	-.9	2.3	149.4
Brazil	4.3	2.9	3.5	27.1
W. Germany	-4.7	14.3	4.6	75.6
Japan	2.0	1.0	1.9	16.3
United States	-3.9	5.1	17.7	75.5
U.S.S.R.	-2.9	7.7	13.4	49.2
Other Producers	.9	3.0	53.8	19.6
WORLD TOTAL	-.03	3.8	114.0	24.6

SOURCES: State Statistical Bureau, **Statistical Yearbook of China**, various years, and FAO production yearbook. (J5CH25BT.R5H)

At present, however, much of animal husbandry output, which for China is overwhelmingly pork production, is small-scale family-based production. As such, it has been heavily influenced by the shift to private management. Fattening periods are shorter and dressed weights (pork per hog) increased from 53 kilograms in 1979 to over 60 kilograms in 1984. The fattening periods are still long by international standards (18 months as opposed to 12 in the U.S.), indicating that potential for sustained growth in output exists.

China's meat production is placed in international comparison in Table 8-4, above. China's meat output matches that of the Soviet Union and is only somewhat below output in the United States. On a per capita basis China's output is extremely low by world standards, roughly half the level for Brazil.

In addition to China's output trends, it is important to single out for special attention the continuation of the "phase two" rural reforms. There was some doubt in 1985 whether the new contract procurement system, under which farmers signed voluntary contracts for grain production, was permanent. The continuation and adjustment of the system in 1986 confirms that the reform is indeed a new step towards market economics in rural China. Furthermore, "phase two" in 1986 is going beyond contract arrangements to encourage and streamline commercial links between urban and rural areas. Adjustments of the grain contract system itself in many areas are encouraging increased peasant sales on the open market at higher prices than those guaranteed by state contracts. Finally, "commodity grain bases" specializing in grain for sale at rates higher than the 30 percent national average have been established in several provinces.

Even outside of "commodity grain bases," farmers are increasingly selling their output for further processing rather than consuming it themselves or selling it in its unprocessed form for direct consumption. As an example of foods used for manufacturing inputs, in 1984 twice as much grain was used in the food processing and brewery industries as in 1978. Furthermore, the growth in the food processing industry (9 percent in 1984) accelerates rural specialization, so that there is more commercial exchange in the rural areas themselves. Previously, commercialization in the rural areas consisted mainly of sales of rural agricultural products to urban areas.

Overall, there is continuity in China's major agricultural trends if weather is given the major responsibility for the 1985 crop output decline. If, on the other hand, reforms have been the principal source of destabilization, the 1986 record will be the best indicator of the severity of interference. In either case, the record in early 1986 confirms that ownership and marketing reforms in rural China are continuing and expanding into new areas.

POLICY

The principal thrust of China's 1986 agricultural policy is to continue to expand the private commercial basis for rural production while at the same time working to solve particular problems, most notably the politically sensitive decline in grain output. These basic policy positions are adjustments of more long-range policies, first implemented in the late 1970s as the "household responsibility system" and significantly extended in 1985 with the "grain contract purchasing system."

1986 policies to strengthen commercial institutions and activities in rural areas have several dimensions, but in many cases bureaucratic control is still an important supplementary tool. One often-stressed policy promotes greater specialization in farm output, especially in quality grains. This shift, in turn, requires providing various subsidiary services for marketing the product and providing inputs. The policy of giving greater responsibility to county-level authorities to promote these services is intended to increase the number of marketing channels and reduce the power of marketing monopolies inherited from the earlier centrally-planned system.

Price adjustments in 1986, particularly steps to raise the effective price of grain and lower the price of fertilizer inputs, are also meant to stimulate the commercial "enthusiasm" of farmers. Commentators in the Chinese press have noted that under the new rural policies, the old bureaucratic mechanisms are no longer sufficient. One significant policy shift intended to strengthen market forces has targeted administrative mechanisms for the transfer of grain between surplus and deficit regions. This solution calls for more financial incentives for surplus regions and greater assumption of shipping and other costs by the deficit regions benefitting from the transfer.

Paradoxically, the strengthening of market forces often appears to require the application of additional direct bureaucratic controls. This is most apparent in policies designed to encourage 1986 grain production, following criticism of 1985's grain output decline. In some regions, local industry is being taxed to subsidize agricultural investment, so as to make grain cultivation more profitable. In others, small inefficient fertilizer plants are being reopened and subsidized to encourage greater fertilizer applications by profit-seeking peasants. Perhaps most significantly, grain prices for sales over the contracted "quota" have been raised to encourage farmers to plant more for sale to the state.

These various policies to strengthen market forces illustrate a basic strategy: the addition of supplementary indirect controls of one kind to compensate for the reduction or elimination of direct controls of another kind. Specifically, direct controls on output mix and procurement are being reduced or eliminated in favor of prices, profit incentives and markets to "let the peasants get rich." But to make the whole system work without traditional rigid control measures, new controls on prices, subsidies and marketing arrangements will have to be added. The policy trend is to reduce old direct controls and increase new indirect controls, with strengthened market mechanisms making up the difference. The policy goal is thus one of transition from central planning to market economics without major output or distribution disruptions.

While the strengthening of market forces is a more general policy position, correcting the 1985 decline in grain output is the most immediate official concern. The concern over grain is political in a double sense: first, influential critics of reforms can use the grain decline to bolster their attacks, and second, the reduction in grain output is largely a reduction in grain sold for urban consumption.

The policies to stimulate grain output were presented in "Document 1" for 1986, a January 1986 Communist Party Central Committee circular on agricultural policy. It has two major directives: first, incentives for grain production are to be adjusted in accordance with the varying conditions in four kinds of grain growing regions, and second, the transfer of grain from surplus to deficit regions is to be stimulated.

Measures to adjust incentives for grain production in four different kinds of regions are the most interesting. The first type of grain-growing area is that which also has a highly developed base of prosperous rural industry and sideline services. In these areas, localities are to be forced to transfer a portion of industry and sideline profits to grain cultivators, either as direct transfer payments or as indirect assistance in the form of infrastructure investment.

In the second kind of grain-growing area, where there are few industrial or sideline opportunities, Document 1 calls for a reduction in levels of grain contracted for purchase so that more may be sold at higher negotiated non-contract "market" prices. This policy is curious and raises an obvious question: why would farmers contract any grain at all with the state if the negotiated market price were higher than the contract price? The most straightforward conclusion is that farmers in these regions are not completely free to determine the level of contracted grain purchases. They have fewer options to grow alternative crops, and so will plant grain and sell part to the state regardless of the official arrangements. In other words, the wording of Document 1 in this case misrepresents conditions to a certain degree. The state is apparently guaranteeing to buy not only contract grain but also any grain for sale in addition to the contracted amount, at a higher price. The state is also dictating the level of contracted grain as a condition for guaranteeing the purchase of extra output at higher prices. Under these circumstances, a reduction in the contracted amount results in an increase of the effective average price the farmers receive for their grain.

In a third kind of grain producing area, where conditions are very poor, Document 1 calls for the purchase of all grain at "market prices," which are stated to be higher than contract prices. Finally, at the other extreme, in areas well-endowed with grain land, all grain should be purchased at lower contract prices, to "maximize peasant sales."

The policy steps in Document 1 are clearly a charade. They camouflage the basic state policy, which seeks to encourage grain production at the least expense to the state budget. The effective price of grain is manipulated by shifting the mix of "contract" and "negotiated" sales. In poor areas, a high average price is proposed to coax more commercial grain from farmers who would otherwise consume it all themselves. In grain-rich areas, where farmers are going to sell anyway, a low average price is proposed so that more grain sales are needed to earn a target income. In areas where farmers do not have to plant grain because of numerous other income-earning opportunities and where local government budgets can be made to subsidize grain output, they are ordered to do so. In short, every effort is made to maintain the perception of market and "contract" institutions, while in fact numerous central controls manipulate the results.

Grain is thus the most significant example of the basic Chinese policy of using new indirect controls to achieve desired ends while reducing the older, cruder command techniques. In the final analysis, the policy is a complex scheme to manipulate prices without appearing to do so.

In spite of their complexity, these most recent adjustments to China's on-going rural reform policies continue to emphasize the individual and private nature of the new agricultural system. The basic features of the reform policies are summarized below.

Under China's traditional agricultural system, each commune, brigade, team, and more recently, each household was assigned an output quota for delivery to the State at the quota price. Sales to the State over the quota were sold at various higher prices. Individual farmers had little if any control over what they grew.

The first phase of rural reforms, the household responsibility system, is over 5 years old and has essentially transformed rural China's production from a collective system to one based on private ownership. The new land ownership (or "responsibility") program was extended in 1983 and 1985 to include the nation's vast rangelands, promising eventual solution to widespread problems of overgrazing, soil erosion, and desertification. Finally, the land ownership transfer reforms were extended even further in 1985 by decollectivizing so-called state farms, farms with heavy government investment managed directly by the Ministry of Agriculture as showplace or pioneering rural production centers. All these steps confirm the fundamental policy of effective private ownership in the rural economy.

The second phase of China's rural reforms, first introduced in 1985, is the contract purchasing system, through which farmers have a degree of choice over what they produce and sell. Under the new contract procurement system, announced in the first "Document 1" of 1985, mandatory deliveries of output to the State were replaced by output deliveries specified in annual contracts to which the farmer and the State mutually agree. This arrangement further dismantled China's centrally-planned economic control mechanisms, further converted rural China to a commercialized, market-oriented economy, and in part made necessary the added complexity of the 1986 grain policies, because the freedom not to plant grain has in some areas dramatically increased the sensitivity of the rural economy to prices and price manipulations.

These then are the major agricultural policy directions as of early 1986. There are numerous subsidiary policies: promoting exports, allocating rural credit, slowing the loss of cultivated land, strengthening extension services, encouraging tractor production, and returning investment in irrigation to 1980 levels. But the fundamental strengthening of market mechanisms and institutions, and within that framework the efforts to promote grain output, deserve the greatest attention.

PROBLEMS

China's greatest agricultural problem is the provision of grain to cities and other grain deficit regions as market institutions become increasingly pervasive in rural areas. A second related problem is the price and availability of high quality fertilizer. Both problems are fundamentally problems of price, with grain prices too low and fertilizer prices too high. These prices, in turn, reflect deeper problems of a more general nature.

China's grain problem is a combination of the shortage of arable land per capita, the low price of grain relative to other crops, and the shortage of foreign exchange for grain imports. With China's dense population, it would make the most sense for China to grow vegetables, fruits and other high value-yielding perishable crops while importing inexpensive grain from the world market. This has been the pattern for South Korea and Japan. Because China's foreign exchange shortage has limited this option, China is faced with the only alternative, a lower quality diet overall and the need to encourage grain surplus regions to continue to grow grain for shipment to cities and other grain poor areas, rather than shifting land use to alternative crops. Without direct Maoist controls, the final problem is one of how to subsidize the price of grain to extract the largest surplus from grain-rich areas. Significantly raising the retail price of grain in cities is politically unacceptable, and so the problem of grain price subsidies is the inescapable result.

The problem of fertilizer usage results from both the 1985 contract reforms and basic problems in the fertilizer industry. Fertilizer use and production declined dramatically in 1985, including the use of higher-quality imported fertilizer. The decline came largely because under the new grain contract purchase system, fertilizer was no longer distributed as compensation for grain deliveries and farmers were faced with high prices for mediocre fertilizer. Expensive poor-quality fertilizer, in turn, reflects China's backward fertilizer industry. Except for a few large modern plants, mostly imported in the 1970s, China's fertilizer is largely produced in small-scale plants operated at the local level. Many of these were apparently forced to close in 1985 as a result of the sharp decline in demand; restarting them in 1986 as part of the grain promotion campaign requires subsidies. Adding to the severity of the fertilizer problem is the heavy reliance on nitrogen fertilizers; phosphate and potassium fertilizers are in extremely short supply.

Although grain procurement and fertilizer supply are probably the most fundamental agricultural problems, other problems are also worth mentioning. There have been continual official complaints and other accounts in the Chinese press of the loss of land and labor to industrial sideline activities. There is reportedly a shortage of well-educated and experienced workers in agriculture, as a result of the lure of other jobs and of towns. The quality of labor, for tillage, care, and weeding, has reportedly declined. The problem has spread to rural party cadres, who are focusing attention more on town industry than on maintaining balanced crop output of high quality. Without more quantitative measures, it is difficult to evaluate these many reports, but they are bound to appear to some degree, and yield and output results for 1985 and 1986 will eventually provide relevant information.

It is also important to mention the problem of feed quality and availability for animal husbandry. Traditionally, China's livestock has relied upon foraging, eating what they could find. In the grasslands, the nutrient value of grass and hay has deteriorated, and other forms of fodder are poorly developed. For a modern animal husbandry industry, quality nutrition is essential, not only from grains and other specialized fodder crops, but also from feed additives, which China now imports in considerable quantity. China is only just beginning to address the problem of livestock feeds, which could prove to be a major restriction on the growth of quality meat and dairy product output.

A final fundamental problem is one of technology levels. With private tiller-owner agriculture now the rule in China, technology transfer to rural areas must rely on more traditional forms of extension work and education. These channels are poorly developed in China, although a network of agricultural colleges exists and forms the foundation of the emerging extension program. The early easy gains in farm productivity from the new ownership system cannot continue for long. The critical question is whether required technology transfer can occur to maintain the growth in productivity so apparent in the early 1980s.

PROSPECTS

In the short term, barring serious weather failures, 1986 should be a year of output recovery for China's crops and continued strong growth for animal husbandry and other subsidiary forms of rural output. In particular, grain output will be up from 1985 levels, but not as high as output in 1984, since area planted to grain has increased only marginally. For other crops, the price reforms and marketing improvements in 1985 should bring significant increases in output and commercial sales.

In general, the intermediate- and long-term prospects for China's agriculture are excellent, because the owner-tiller environment will continue to generate adjustments to weather and technical conditions and at the same time inspire efforts to make the land more productive, either by different choices for cropping patterns, or because of attention paid to other products, in particular animal husbandry.

In the long run, output will continue to grow more rapidly than is usual for developing countries, but results may fall somewhat short of official projections. Emboldened by the success of the past few years, China's agricultural officials in 1985 began speaking of quadrupling agricultural output by the year 2000, relative to 1980, which is a much higher target than that announced in 1980, when all of industry and agriculture together were to quadruple in the same period. Quadrupling agriculture is not likely, but growth will be such that tripling is possible and even probable.

One major mechanism for this increase is the shift of planted land and rural labor out of traditional staple crops, such as coarse grains, and into other crops with higher value yields and into animal husbandry and sidelines which bring an even greater return to labor, the relatively plentiful resource.

The shift in cropping patterns is extremely important for maintaining China's rapid growth in agricultural value output. Some crops, such as fruits, vegetables, and certain industrial crops, have a much higher "value yield" (gross revenue per hectare), than staples and other traditional crops. Even if yields in staples grow slowly, and even if farm land is increasingly taken over for industry and housing, shifting the remaining land from lower to higher value-yielding crops will increase the average value yield for all planted land. Hence, in spite of land constraints and varying seasonal limits on yields for individual crops, total crop output in China, barring major weather disasters, can continue to sustain its remarkable growth rate of the past few years.

CHAPTER NINE — Commerce and Prices

EXECUTIVE SUMMARY

TRENDS

* China's long-term rapid commercialization has continued to match overall economic trends, booming to mid-1985 before slowing dramatically by early 1986.
* In spite of the general slowdown, private sales continue to grow.
* Inflation as high as 30 percent in 1985 moderated somewhat through early 1986, as relative price adjustments continued.

POLICY

* New emphasis has been added in 1986 to official encouragement of "horizontal" commercial transactions.
* 1986 is officially a period of "consolidation" in price reform, but shifts continue in industrial and farm pricing.

PROBLEMS

* Commercialization's major problem is the domestic system of retail prices, which seldom reflect demand or costs.
* State leaders implementing price reform must avoid political disruption by managing the inevitable inflation accompanying reform.

PROSPECTS

* Commercialization of the economy will continue and even accelerate, due to fundamental underlying factors.
* Inflation will moderate in 1986 as the economy recovers, but will grow serious again by early 1987.

TRENDS

The rapid growth of commercial transactions in China continued into 1985 before slowing somewhat as overall economic growth declined in the autumn and winter of 1985-86. In spite of the slowdown, however, the continued increase in transactions of all kinds confirms that China's economy is becoming rapidly monetarized, after decades of Maoist emphasis on self-sufficiency. The increase in commercial activity during 1984-85 was exaggerated by the relatively high level of inflation by Chinese standards, but even after considering inflation, growth in wholesale and retail business is an indicator that fundamental reforms in China's economy are also reflected in the commercial sectors.

The rapid expansion in commercial activity is best seen in Table 9-1, below, which shows not only double-digit growth of retail sales overall, but also how growth of sales by collectives and individuals has far outstripped sales by state-owned units. Acceleration of sales in 1985 makes the process even more remarkable. Retail sales overall grew 27.5 percent in 1985, and sales by individuals, which have virtually doubled every year since 1980, grew 110 percent in 1985.

Two qualifications of the commercial record are needed: there was a slowdown in state commercial activity in the second half of 1985, and price inflation, as high as 30 percent for a few months in rural fairs, reduced the "real" significance of the monetary increases recorded in Table 9-1.

The commercial slowdown in the second half matches the overall slowdown in industrial production and the slower growth of farm output at 1985 harvest time. The slowdown, however, is not apparent from annual data, and even comparison of end-year figures with the record in mid-1985 shows that only the growth rate for sales by state-owned units slowed. Monthly data, however, show a general slowdown in sales for all units, although it was much more severe for state-owned enterprises, especially during the last three months of 1985.

Table 9-1
RETAIL SALES

Year	Total Retail Sales	State Owned	Collectively Owned	Jointly Owned Ventures	Individual	Peasants to Non-peasants
	(Growth Rate)					
1980	18.9	13.1	61.8	N/A	248.8	45.3
1981	9.8	4.6	32.5	175.0	149.3	29.6
1982	9.4	4.7	21.3	45.5	99.5	23.9
1983	10.9	4.4	14.4	125.0	147.3	20.0
1984 *	18.5	14.9	12.4	111.1	75.4	27.8
1985	27.5	13.6	18.0	84.2	108.8	70.6
	(Billion Yuan)					
1985	430.5	174.7	157.8	1.40	67.6	29.0

* NOTE: The definition of State and Collective Enterprises changed in 1984. Growth rates are calculated based on consistent definitions.
SOURCES: State Statistical Bureau **1985 China Statistical Yearbook** and **Tongji** March, 1986, p. 48. (j6bi06s.n6e)

The most remarkable trend shown in Table 9-1 is clearly the very rapid growth in sales by privately-owned enterprises. Monthly data show that by the end of 1985, these sales were roughly 16 percent of all sales, compared to 1.6 percent in 1981, a ten-fold increase in four years. Furthermore, in the late-1985 slowdown, private sales were much less affected than either state or collective sales.

The rapid growth of private commercial establishments is reportedly putting pressure on state and collective enterprises to provide better-quality products at more competitive prices. In some cases sales by state stores have been dramatically reduced. Pork sales by state stores fell from 77 percent of the total in 1984 to 47 percent in 1985. For egg sales, the state share fell from 40 percent to 23 percent, and for vegetables from 51 percent to 26 percent. In some extreme cases state establishments have reportedly shut down altogether and leased their premises to private traders.

Although most of the attention paid to China's commercial renaissance focuses on urban transactions, the increased reliance on markets and money transactions is perhaps equally dramatic in rural areas. By the end of 1985, more than 61,000 free markets were registered, an increase of 5,000 compared to 1984. These markets reported a 1985 turnover of 63 billion yuan, a 38 percent increase over 1984. Of these sales by peasants, 12 billion yuan were sales in cities, while a full 51 billion yuan were sales in rural fairs among peasants, a 34 percent increase over 1984. In short, the commercialization of

China's economy is as significant for the rural economy as for the urban economy.

The pace of rural commercialization through 1984, the last year of direct state procurement of grains, is presented in Table 9-2, below, which shows how sales at the traditional list price plummeted from 85 percent of the total in 1978 to 34 percent at the end of 1984. At the same time, the share sold at above-quota prices quadrupled while sales at other "free market" prices tripled in volume. Although the new system of contracted grain sales to the state have superceded the older multi-tiered system, the data in Table 9-2 show that commercialization in rural procurement sales, as well as retail sales, has been going through a steady transformation throughout the reform period.

Table 9-2
VOLUME OF FARM AND SIDELINE SALES BY PURCHASING PRICE 1978-84

	Total Value	List Price	Above-Quota Price	Nego-tiated Price	"Free" Market Price
(Billion Current Yuan)					
1978	55.79	47.24	4.42	1.02	3.11
1979	71.36	51.17	11.94	3.50	4.75
1980	84.22	54.22	15.10	8.00	6.90
1981	95.50	55.56	20.00	11.00	8.94
1982	108.30	62.22	22.50	12.50	11.08
1983	126.50	60.70	35.50	17.00	13.30
1984	144.00	48.78	48.39	20.70	26.13
(Percent of Total)					
1978	100.0	84.7	7.9	1.8	5.6
1979	100.0	71.7	16.7	4.9	6.7
1980	100.0	64.4	17.9	9.5	8.2
1981	100.0	58.2	20.9	11.5	9.4
1982	100.0	57.5	20.8	11.5	10.2
1983	100.0	48.0	28.1	13.4	10.5
1984	100.0	33.9	33.6	14.4	18.1

SOURCES: State Statistical Bureau official data.

It should be mentioned at this point that "free" markets are not entirely free, because all prices are monitored by state agents and significant deviations from acceptable norms are rather strongly discouraged.

The old procurement system, in spite of its rapid transformation, was still a mandatory crop delivery system. A somewhat more voluntary, contractual, system has been implemented since early 1985. Presented in what is known as "Document One" for 1985 and supplemented by a second "Document One" in 1986, contract reforms end the more than 25-year old Maoist policies of required crop sales to the state. In their place, individual contracts for delivery of output at agreed-upon levels and prices have been substituted. For a more thorough discussion of agricultural reforms, see Chapter 8.

For both rural and urban commerce, one area for which there is little official statistical data is the commercial relations between enterprises. Yet, what information there is describes the rapidly increasing role of "horizontal" transactions between enterprises for scarce materials. For many materials, in particular energy and metals, there is competition for deliveries, and increasingly state enterprises, which traditionally received priority in supplies, are missing deliveries and complaining about non-fulfillment of traditional contracts. The main issue is price. Other purchasers are offering premium prices, and sellers are finding ways to accommodate their needs before those of state enterprises.

A horizontal marketing network is also forming for manufactured consumer goods. For example, Shanghai -- a city which usually supplies goods to other cities -- is now a major purchaser of consumer goods from other areas. The volume of consumer goods purchased elsewhere by Shanghai's two major department stores was 150% higher in 1985 than in 1984.

Finally, commercial trends in China have included shifts in consumer demand patterns. The growth in demand for foodstuffs has shifted from staples to non-staples; and within staples from coarser to finer grains. Chinese consumers are placing a greater emphasis on nutritional value, ease of preparation, variety, and quality in food purchases.

In consumer manufactures, demand has shifted from necessities to luxury goods; freezer sales increased 550 percent in 1985 over 1984. Consumer durables purchases reflect an interest in chore reduction and enrichment of material life. The four status symbols of the Maoist period -- bicycles, wristwatches, sewing machines, and radios -- have been replaced by televisions, video cassette recorders, washing machines, and refrigerators. All of these consumer preferences reinforce calls for greater quality control for consumer, agricultural, and industrial products, and for the production of more high-quality goods and fewer low-quality goods. Experimental price reforms in Shenzhen have already explored the effect of price differentials for high and low-quality meats, and these differentials will become increasingly commonplace as suppliers have more freedom to set prices for quality goods demanded by consumers.

As much of the discussion above indicates, the commercialization of China's economy is closely linked to prices and price changes. 1985 was a major year for adjustments in what is universally regarded as an irrational price system not representative of relative scarcity values. Many staples and basic materials, such as energy, are low-priced and rationed or in short supply. Others, in particular manufactures considered to be luxuries, are sold at very high prices and have voluminous unsold inventories. In addition, there is little, if any, price differentiation for quality differences.

Under the pressure of commercial transactions, 1985 price changes began to accelerate adjustments already begun in earlier years. Because prices in general rise more easily than they fall, the result was significant inflation in 1985. At the same time, official price changes, especially in foodstuffs sold to urban populations, have added to the inflationary trends reported nationwide.

Tables 9-3 and 9-4, below, give price data both in historical perspective and on a monthly basis for 1985-86.

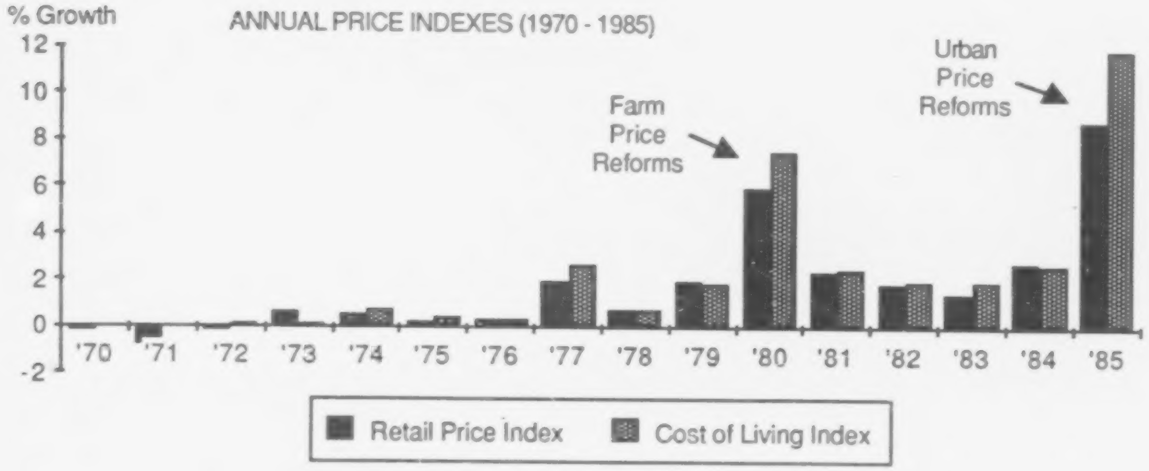
Table 9-3
PRICE INDICES
(Percent Growth)

Year	Retail Price Index	Cost of Living Index
1975	.2	.4
1976	.3	.3
1977	2.0	2.7
1978	.7	.7
1979	2.0	1.9
1980	6.0	7.5
1981	2.4	2.5
1982	1.9	2.0
1983	1.5	2.0
1984	2.8	2.7
1985	8.8	11.9

SOURCES: State Statistical Bureau March communique on 1985 plan fulfillment and **Monthly Statistical Bulletin** (in Chinese), various issues. (J5CBC02S.T5J)

It is important to note that Chinese data on prices, especially prices in rural markets and fairs, are probably of poor quality, because of the lack of Chinese familiarity with random sampling techniques. Additionally, many of the most significant price increases have occurred in unofficial transactions and hence are under-reported in overall average price indexes. It is not clear, therefore, how much various published price data deviate from what random sampling would show. Given widespread reports of black market activities, it is very likely that price increases in 1985 are considerably higher than those reported in official statistics.

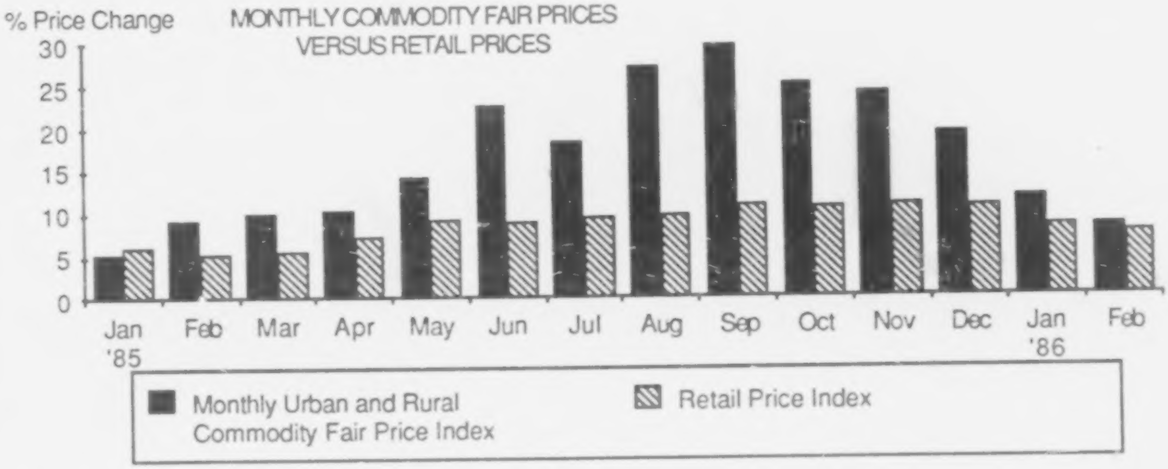
Diagram 9-1



Nevertheless, data in Tables 9-3, 9-4, and 9-5 show that 1985 was a year of relatively rapid price increases which then slowed towards the end of 1985 and in the beginning of 1986.

The data in Table 9-3, above, indicate just how low official inflation has been in China. The one recent exception was in 1979-80, at the time of major rural price reforms associated with rural land reform begun at that time. 1985 was a second period of price inflation, but in industrial goods as well as rural goods, again coinciding with major reforms, this time in industry and the urban economy.

Diagram 9-2



Monthly data in Table 9-4, below, present the most volatile price series for which official data are available. Price inflation in "urban and rural commodity fairs" is the closest trend to "free market" prices in China, and the monthly data below show that inflation peaked in September at roughly 30 percent. The same price series shows, however, that by early in 1986 this measure of inflation had been slowed dramatically, to less than 9 percent.

Urban household survey data in Table 9-5, below, also show relatively rapid rises in average prices for major non-staple foods purchased in 1984-86. The growth rates are calculated relative to the same quarter in the previous year, but it should be made clear that these growth rates are for unit values and not prices of goods controlled for quality. As a result, a higher average value per kilogram for beef, for example, could indicate increased purchases of higher quality cuts rather than an increase in the price of the same quality meat. But the increases in unit value shown in Table 9-5 are so high in some cases, and the products relatively homogeneous (milk, eggs), that the information confirms a period of rapid inflation in 1985.

An additional caution about the data in Table 9-5 is that the increases are measured over the same quarter in the previous year, so that a one-time increase in prices will show up for that quarter and the following three quarters as well. This is clear in the case of poultry when the price apparently rose sharply in early 1985. High rates for the rest of the year merely show that poultry prices stayed at the new higher level relative to the previous year.

Table 9-4

CONSUMER DURABLE PRICE INFLATION IN URBAN AND RURAL COMMODITY FAIRS

(Percent growth over same month in previous year)

1985	Jan	5.2
	Feb	9.1
	Mar	10.1
	Apr	10.4
	May	14.4
	Jun	22.7
	Jul	18.5
	Aug	27.3
	Sept	29.8
	Oct	25.1
	Nov	24.0
	Dec	19.2
1986	Jan	11.8
	Feb	8.5

SOURCE: State Statistical Bureau, **Monthly Statistical Bulletin**. May, 1986, page 80. (j6bcc04s.n6f)

For some products, prices clearly rose most dramatically in early 1985, but others, such as fresh milk and eggs, reflect new bursts of inflation very late in the year. In the case of these two foods, the increases were expected to some degree, because one reason for the shortage of milk was its very low price, while for eggs, demand had increased very rapidly earlier in the year as higher prices for meat and fish influenced a shift to eggs as a cheaper alternative source of protein.

Table 9-5

GROWTH IN PRICE (UNIT VALUE) OF MISCELLANEOUS FOODS

(Percent inflation over price in same period in the previous year)

Time Period		Pork	Beef & Mutton	Poultry	Fresh Eggs	Marine Foods	Fresh Milk
1984	**I**	**4.13**	**11.03**	**3.67**	**.06**	**10.37**	**.16**
	II	5.11	19.38	5.33	-.85	8.84	.94
	III	-.84	5.59	5.87	-1.92	12.95	9.92
	IV	5.85	9.75	7.50	1.20	13.87	-3.00
1985	**I**	**11.38**	**19.86**	**21.60**	**2.67**	**36.99**	**-10.24**
	II	25.28	9.11	19.23	1.47	41.47	3.43
	III	29.10	50.04	23.40	16.97	45.60	4.72
	IV	27.94	80.03	13.09	17.63	27.14	29.89
1986	**I**	**21.36**	**32.66**	**5.73**	**9.48**	**17.58**	**19.66**

SOURCES: State Statistical Bureau, **Monthly Statistical Bulletin**, June 1986, p. 80 (J5CBC01T.B5J)

Overall, then, commercial activity in China is growing very rapidly and emphasizing non-state institutions, with the most rapid growth in retail sales coming from individually owned enterprises. An important part of this commercial explosion is the widespread program of price adjustments underway in retail, rural, and industrial materials markets. Better data are needed for a more complete understanding, but what information there is indicates that China has embarked on a major drive to commercialize its economy and adjust prices so they can play their necessary role. Price adjustments, in turn, imply inflation, and hence 1985 was a year of both price adjustment and rapid general price rises.

POLICY

Chinese commercial and pricing policy through the first half of 1986 has the over-arching purpose of encouraging commercial expansion, especially in the private sector, while controlling inflation and ensuring the availability of goods at stable prices.

The official emphasis on strengthening the market economy, adjusting prices, and making enterprises responsible for their own profits has been confirmed for several years from the highest leadership levels. With the presentation of the Seventh Five Year Plan (1986-90), additional importance has been attached to the growth of private-sector commercial establishments. The encouragement takes many forms, including promotion of ownership shifts from state to cooperative and even individual control, and increasingly easy permission for opening private shops. In 1976, at the time of Mao's death, China had 400,000 private enterprises; by early 1986 there were over 11 million.

In addition to the major policy theme of open encouragement for commercial operations, there are numerous subsidiary policies: improving the mix of goods available, their quality levels, and the efficiency of the commercial system by investing in wholesale marketing channels, as well as a general reduction of excess demand for goods in short supply. Efforts to improve supply and product quality include closing small inefficient plants which produce poor quality goods at high cost and, in the process, use scarce resources which could otherwise be used for higher quality products.

These various policies dovetail with the fundamental policy direction of the past five years: rural and urban economic reforms which by 1986 have transferred virtually all farmland, including grasslands and state farms, to individuals and begun to pass control of industrial enterprises to on-site managers. (For more information on these reforms, see Chapter 3 on Industry and Chapter 8 on Agriculture). The importance of these ownership and control transfers lies in the powerful incentives they introduce to buy and sell commercially rather than trusting the cumbersome and undependable plan allocation process. These shifts are the driving force behind much of China's commercial expansion.

One major reason why both central and local government policies continue to encourage private shops in cities and towns is that new service establishments are absorbing excess labor. At the same time, farmers increasingly are being given permission to come into urban areas to sell their produce and other goods. Additionally, the very rapid urbanization underway in China is bringing rural populations into urban areas permanently, where their lives become much more closely related with the nation's money economy. All of these steps are supporting the use of money and markets, in both urban and rural settings.

The greatly increased commercial activity between decentralized shops and individuals is putting greater importance on prices, and the clear policy, again promoted from the highest leadership levels, is to adjust prices so they better reflect demand and costs.

Price reform, however, is difficult to carry out, largely because of the impact rapid inflation might have on urban political stability. In fact, increased commercialization is a basic part of price reform, because the introduction of individual and profit incentives makes almost irresistible the natural power of exchange relationships to raise prices of scarce goods and services. The Chinese are discovering this phenomenon. Therefore, together with their programs to introduce price shifts, official policy-makers are also making considerable efforts to police and discipline price rises considered to be excessive or poorly timed. The combination of these two forces, relaxation and discipline, continue to govern price reform in 1986.

Officially, 1986 price policy emphasizes a slowing down of price shifts, to allow the ambitious price reforms of 1985 and the related inflation to settle. A State Council circular released early in 1986 proposed "consolidation, digestion, supplementation, and perfection" for price reform. Nevertheless, price adjustments are continually being announced, and it is clear that although there may be no major price shifts in 1986, reform is expected to continue.

Within this framework, a very high policy priority is limiting the adverse impact of price reforms on urban standards of living Additional price monitoring stations have been set up in towns and cities. The purpose is to prevent market forces from working so well that urban supplies of foods and necessities at traditional prices are insufficient.

PROBLEMS

There are essentially three major problems facing China's commercial and price reform policy-makers. First, the output mix of goods does not match consumer demand patterns because traditional prices give the wrong signals to producers. Second, relaxation of prices to allow corrective adjustments risks explosive inflation because of the very large amounts of money held by individuals in the form of both savings and cash. Third, price reforms which raise farm prices also raise urban price subsidies; there is no quick solution to what is essentially a fundamental imbalance between urban and rural standards of living when political power is centered in the cities.

Chinese policy-makers continually refer to the inability of the product mix to satisfy consumer tastes. The problem is usually treated as one of insufficient attention paid to quality products, too much attention paid to output of large quantities of poorer products, and wasteful use of scarce resources. In this way, the problem is addressed by referring to symptoms rather than the cause, which is irrational prices. Prices of low and high quality goods are often very similar. Reductions in the price of lower quality goods automatically means reduced profits for enterprises, increased subsidies, or closings. Price increases for high quality goods is inflationary. Hence, the first fundamental problem of commercial reform in

China is price reform itself.

The issue of inflation is the major problem facing price reformers. This problem is particularly acute because inflation has been repressed in China's economy for so many decades. Money incomes and money in circulation has in the past had little if any effect on prices, which were set for accounting purposes. Sales of goods in short supply were controlled by a ration system with ration coupons. As a result, tremendous purchasing power in the form of savings and cash holdings built up. If prices are truly to govern consumer choices, something must be done to absorb this purchasing power. A short-term solution is to maintain price monitoring for major consumer goods. A longer-term solution is the correction of skewed relative price differentials, coupled with productivity increases which raise output levels. The desired result is a balance between goods supply and money supply. Such a balance could be achieved through inflation or through rapid increases in output. To achieve the short-term solution, price monitoring and controls will be necessary for some time to come.

The problem of excess purchasing power is clear in both the consumer goods market and the investment goods market. It is amusing to read official exhortations calling for a reduction in consumer goods' inflationary pressures by channeling the funds into uses for "industrial development," when at the same time other officials are stressing the need to reduce the level of investment funds directed into industry and construction. The fundamental problem is that of too much money in circulation, and the resulting problem is inflationary pressure which will remain for a long time to come.

Finally, the problem of urban price subsidies is also likely to last many years. Historically, the Chinese government has indirectly subsidized urban consumption of foodstuffs produced in rural areas through resale programs. Two major periods of rural price increases have been 1979-80 and 1985; the purpose of policy directives in both periods is to stimulate farm output. At those times, related increases in urban food prices necessitated direct income subsidies to urban dwellers. There is no easy way to solve the problem of price reform and increased urban subsidies, because subsidies must be paid out of taxes on industrial goods, taxes which will either dampen urban wage increases or raise the price of manufactured goods. Either option, lower subsidies requiring lower tax increases, or greater subsidies requiring greater tax increases, predicates a lower urban standard of living relative to new rural standards of living. This is politically sensitive and difficult given the concentration of people in major cities. The ultimate solution is to raise industrial productivity, so that more consumer goods of higher quality are available for the same industrial wage bill. In that case, higher profits and higher urban wages from sales to rural consumers will allow a phase-out of price subsidies. Again, however, this solution will not come quickly, and in the meantime the problem of urban price subsidies will persist.

PROSPECTS

Overall, the prospects for 1986 suggest continued commercial expansion and moderate inflation through late in the year, when more rapid industrial growth and the possibility of a good harvest may cause renewed price rises. Price reform will continue in numerous smaller adjustments reflecting quality differentials, but there will be no major price adjustments comparable to those in 1979 or 1985.

Prospects for continued commercial expansion are supported by several basic underlying facts about China's current economic development: the rapid urbanization of the population, the underlying egalitarian asset distribution in rural areas, the good prospects for increased managerial decentralization in industry, and the overall rapid pace of industrial growth. Official Chinese estimates foresee a 16 percent growth in commercial transactions for 1986 overall.

China's population could be more than 50 percent "urban" by 1988 or 1989. It is unclear the degree to which statistical urbanization does in fact reflect actual changes in population life styles and commercial dependence, but the evolution of the population structure is clearly accelerating in an urban direction. Towns and cities are centers of commerce, and as China's rural population leaves the family land to arrangements of shared management and moves to cities, the level of commercial participation nationwide will continue its very rapid rise. Because the recent rural reforms have given households their own lands and herds, peasants who have migrated to urban areas will not be impoverished. Rather, the new urban populations will have assets and family sources of income, unlike urban populations in so many poor countries. These factors indicate a strong potential for the gradual emergence of an urban middle class and active commercial development.

In industry, as a result of continued experimentation with individual enterprise management, and the determination of national leadership in carrying out urban reforms, continued decentralization of industrial decision-making is virtually certain. In this environment, competition for inputs, capital, and markets should continue to expand "horizontal" industrial commercial relations and at the same time force price changes in directions reflecting scarcity and usefulness.

Although inflation in 1985 was high by historical Chinese standards, 1986 will probably see a slow-down in the rate of increase. Major reasons for this conclusion include the slowdown in industrial growth in general, better control over the money supply following 1985's bank reforms, and the smaller 1985 harvests, since agricultural procurements are a major vehicle for introducing currency into the economy. Price adjustments will continue for the foreseeable future, but the degree of their success in becoming accurate guides for decentralized decision-makers is still uncertain. Regardless of their success and methods, they remain a critical question for the overall success of the urban and industrial reform movement.

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CHAPTER TEN — Transport

EXECUTIVE SUMMARY

TRENDS

* Total transport volume grew 15 percent in 1985, more than matching the pace of overall economic growth.
* Passenger air transportation grew 40 percent in 1985 for the second year in a row.
* Highway transport shows the greatest promise of easing the short-haul transport bottleneck.

POLICY

* State investment programs and enterprise decentralization are the major policy tools used to solve the transport problem.
* Investment in highways and rail roadbeds stresses upgrading old lines rather than opening new ones.
* Some ports are being placed under direct administrative control of the cities themselves.

PROBLEMS

* Transport investment is seriously inadequate, especially when China's transport shortage is considered in international perspective.
* Accidents, poor road quality, shortage of right-of-ways, low quality vehicles, and fuel shortages all contribute to the urgency of China's transportation system crisis.

PROSPECTS

* Growth in transport supply will be far slower than required, largely because of inadequate investment.
* The highway system should improve dramatically by 1990, however.

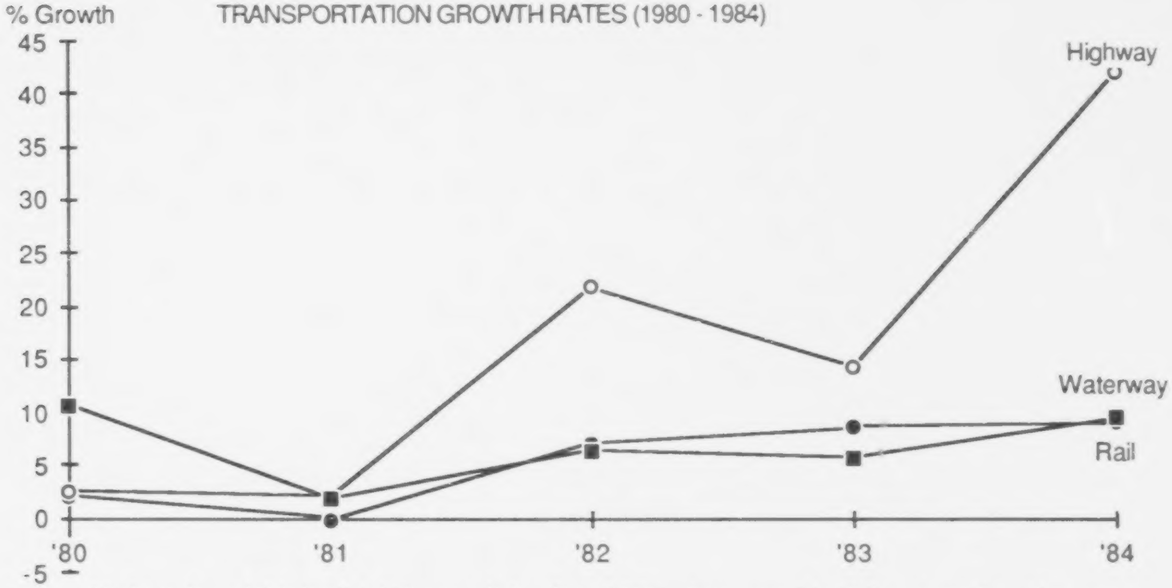
TRENDS

Domestic transport in 1984 and 1985 experienced very rapid growth, helping to mitigate the severity of China's transport shortage. While the transport sector is no longer the critical constraint on China's economic development that it was in the early 1980s, it remains a bottleneck for the movement of coal from mine to user, for the shipping of agricultural and light industrial products from rural to urban areas, and for the delivery of imports and exports. Growth in transport volume has not kept pace with overall industrial growth over the past five years, although the gap was narrowed in 1985.

Following strong growth in all transport sectors in 1984, total transport volume in 1985 was up 15 percent, nearly matching the dramatic industrial acceleration. Rail freight grew 12 percent, while water transport grew even more rapidly, 20 percent over 1984. Growth rates in individual transport subsectors for freight and passenger carriage are given in Table 10-1 below.

Railways in China continue to carry the largest share of freight traffic of any country in the world and dominate all long-distance travel, although the share of total freight transported by rail was reduced from over 80 percent in 1950 to just under 50 percent in 1985. Only the USSR has a lower share of road transport, because of heavy pipeline usage. Movement of coal and timber is largely by rail and accounts for over 40 percent of all freight transport, due to the remote location of these resources. Commercial timber is found solely in the northeast. Similarly, despite coal deposits in almost every province, the most accessible and highest quality coal is located in the north and northwest, especially in Shanxi, far from coastal industrial centers. Furthermore, coal production could become increasingly concentrated; coal from Shanxi and Inner Mongolia is expected to account for 60 percent of output by the year 2000. Railway passenger traffic has grown rapidly in the past two years, largely in response to relaxed controls on individual travel which have coincided with urban reforms. Total passenger carriage is dominated by the rail subsector (as is the case with freight), with nearly 60 percent of all person-kilometers over the last five years logged on railways.

Diagram 10-1


TRANSPORTATION GROWTH RATES (1980 - 1984)

Although published highway data for 1985 show negligible growth, these data only include freight carried by vehicles under the highway transport department (which represented less than one-quarter of highway freight volume in 1984). The 1984 record of growth in excess of 40 percent, including private transport, was probably repeated in 1985, considering the rapid growth in rural industry and the increase in 1985 vehicle imports. Therefore, while still relatively small in overall tonnage, highway freight is the fastest growing subsector in China's transport system.

Growth in highway transport and the number of vehicles which are used primarily for short hauls highlights both a major fault of China's planned economic system and illustrates how the reforms may allow private incentives to correct shortcomings. Under command planning, distribution problems tend to attract solutions based on engineering rather than economics. Expensive inter-provincial transport projects are promoted which link regions with obvious complementary specializations. At the same time, much more affordable local transport systems, exploiting less striking but perhaps equally significant intra-provincial and local sources for gains from trade, have traditionally been neglected.

Similarly, growth in the number of private shipping lines along the Yangtze river waterway network, which carries 80 percent of China's inland waterway freight volume, also suggests more responsiveness to local needs and potential profits. The majority of water transport volume is still handled by the Ministry of Communications. However, private shipping grew 50 percent in 1984 and rapidly again in 1985, although the exact rate is not yet known. Private ownership of boats along the Yangtze has also increased from none prior to 1979 to 173,000 in early 1985, and to 230,000 by the end of that year. Privately owned boats are operated by more than 800 shipping companies.

Table 10-1
CARGO AND PASSENGER TRANSPORT, 1981-1985

(Item)	(Units)	1981	1982	1983	1984	1985
Cargo Transport Volume						
	....(billion ton-kilometer)	1,162	1,240	1,330	1,451	1,667
	...........(percent growth)	.9	6.8	7.2	9.2	14.9
by Railway						
	....(billion ton-kilometer)	571	612	665	725	813
	...........(percent growth)	.0	7.1	8.6	9.1	12.1
by Highway						
	....(billion ton-kilometer)	25.3	30.3	33.5	35.4	35.5
	...........(percent growth)	-.8	19.8	10.6	5.7	.3
by Waterway						
	....(billion ton-kilometer)	515	548	579	634	757
	...........(percent growth)	1.9	6.4	5.7	9.5	19.5
by Air						
	....(billion ton-kilometer)	.17	.20	.23	.34	.42
	...........(percent growth)	21.4	17.6	15.0	47.8	22.1
by Pipeline						
	....(billion ton-kilometer)	49.9	50.1	52.4	57.2	61.2
	...........(percent growth)	1.6	.4	4.6	9.2	7.0
Cargo Handled at Major Seaports						
	.............(million tons)	219	238	250	275	311
	...........(percent growth)	N/A	8.4	5.0	10.4	12.9
Passenger Transport						
	(billion person-kilometers)	250	274	310	362	425
	...........(percent growth)	9.6	9.8	12.8	17.0	17.3
by Railway						
	(billion person-kilometers)	147	158	178	205	242
	...........(percent growth)	6.5	6.9	12.8	15.2	18.1
by Highway						
	(billion person-kilometers)	84	96	111	134	154
	...........(percent growth)	15.1	14.9	14.7	20.9	15.4
by Waterway						
	(billion person-kilometers)	13.8	14.5	15.4	15.4	17.2
	...........(percent growth)	7.0	5.1	6.2	.0	11.7
by Air						
	(billion person-kilometers)	5.0	6.0	5.9	8.3	11.7
	...........(percent growth)	25.0	20.0	-1.7	40.7	41.0

SOURCES: China's State Statistical Bureau, **Statistical Yearbook of China**, various years. 1985 data from the SSB March 1986 communique on plan fulfillment.

The recent growth in private traffic on highways and inland waterways may mean that incentive reforms are correcting for the old bias against short haul transport. Five years ago vehicles under the state highway department transported 33 percent of highway freight volume. In 1984 they accounted for only 21 percent of the total, due to the expanded role of non-state vehicles. Although a similar time series is not available for passenger transport, the establishment of local bus companies and the emergence of private vehicles indicate a growing dependence on highways for short distances. Roads now carry 70 percent of inter-city passengers but still only 31 percent of China's total passenger-kilometers. Employment in private transport businesses rose more than 40 percent in the first half of 1985 over the end-1984 level. As of February 1986, there were reportedly roughly 290,000 vehicles operated by individuals and cooperatives which represented a 400 percent increase over 1983 (and surpassed the total number of vehicles under government-sponsored transport departments).

Air transport, which constitutes the smallest segment of China's transport system, continued to grow rapidly in 1985. Passenger transport growth matched the 1984 record of 41 percent, while air freight grew more slowly than in 1984: 22 percent, down from 48 percent. The Ministry of Aviation has been expanding and modernizing China's fleet of civilian aircraft by promoting domestic research, development and technology transfer for the long-term, and by increasing imports of aircraft to meet current needs. Imports of air transport equipment were up 250 percent in value terms in 1985. New, non-military passenger aircraft was the United States' largest single commodity export in 1985 to China valued at 365 million dollars. If propeller planes, combination cargo-passenger planes, and parts are included, the U.S. sold over 600 million dollars worth of aviation equipment to China. The establishment of six independent regional airlines which are allowed to compete with the State's airline, CAAC, should encourage continued growth in air transport.

POLICY

The major channels for increasing transportation's output level are increased investment levels from central, regional, and individual sources. State policy is designed to promote that end in two dimensions: (1) direct investment in transport, and (2) reforms providing indirect incentives for investors through decentralization at lower levels. Under decentralization, provincial and local governments are given more responsibility to invest in public facilities such as roads and airports. At the same time, enterprises and individuals have more incentive to invest in private capacity, particularly in private trucks and buses. The state itself promises to invest heavily in transport in the next five years in order to increase rail capacity out of Shanxi and between major eastern cities, as well as to expand port capacities and develop some limited-access highways. State investment will probably continue to favor the rail sector. In 1984, 60 percent of the state's investment in transport and communications went to railways. While the total investment fund for 1985 is not yet known, investment in railways will reportedly be the highest in recent years at 7.4 billion yuan.

Table 10-2
CAPACITY GROWTH AND CAPITAL CONSTRUCTION IN TRANSPORTATION, 1981-1985

(Item)	(Units)	1981	1982	1983	1984	1985
Railroad Lines	(kilometers)		31	601	1,247	359
Double Tracks	(kilometers)	. . .	. . .	. . .	488	231
Electrified Tracks	(kilometers)	. . .	. . .	. . .	700	1,103
Port Cargo Handling Capacity	(million tons)	2.36	20.00	17.73	7.18	53.62
State Capital Construction Investment Total	(billion current yuan)	44.29	55.55	59.41	74.32	106.10
	(percent growth)	-20.8	25.4	6.9	25.1	42.8
in Transport, Post, & Telecommunications	(billion current yuan)	4.05	5.72	7.80	11.62	17.60
	(percent growth)	-35.1	41.4	36.4	48.9	51.5
Average Daily Haul of Freight Locomotives	(thousand ton-kilometers)	. .	720	730	744	774
	(percent growth)	. . .	. . .	1.4	1.9	4.0
Average Berthing Time for Ships	(days)	. . .	. . .	9.9	8.7	11.1

SOURCES: China's State Statistical Bureau, **Statistical Yearbook of China**, various years. 1985 data from the March 1986 SSB communique on plan fulfillment.

China's commitment to maintaining and improving public infrastructure has varied since 1980 but currently appears strong. Table 10-2, above, presents available data on the expansion of transport capacity and transport investment since 1981. After a general slump in investment and additions to capacity in 1981-82, State investment in the entire communications and transportation sector increased 300 percent from 1982 to 1985. Similarly, expansion in rail and port capacity was dropped to almost nothing in 1981, but recovered again in 1983-84. Expansion of berthing capacity was particularly strong in 1985.

Investment growth is important for understanding the overall growth in transportation and freight presented in Table 10-1, above. Long-term expansion of transport capacity will require a steady commitment of large investment funds and possibly considerable amounts of foreign exchange. The foreign exchange requirement becomes particularly relevant when one considers China's technical needs for aircraft, fuel efficient vehicles, electronic control systems, and other elements of a modern transport system unavailable domestically given China's current level of technical development.

Rail and air transport investment remains almost entirely dominated by the central ministries. Responsibility for road investment, on the other hand, is shifting toward the end user. In May 1986, the State Council introduced a surcharge on motor vehicle purchases and increased highway maintenance fee collections; both are to go towards highway construction. Similar to the approach adopted by the government for railway development, official plans for highway construction emphasize the upgrading of existing roads over expansion with new highways. Also, construction is to focus on economically advanced areas, energy bases, Special Economic Zones, and ports, as opposed to the previous plan which expanded roads largely in mountain and border areas.

Freight rail transport expansion over the next five years (1986-90) is to be concentrated on upgrading the 16,000 kilometers of trunk lines in the northeast and coastal regions, with a planned investment of 70 billion yuan by the state. This level of investment is 80 percent higher than the total for the previous five years, from 1980 to 1985. Technological transformation will consist of double tracking, electrifying tracks, and computerizing operations and management. Previous five year plans placed more emphasis on expanding rail lines into relatively isolated regions of the country; the new plan appears much less ideologically oriented and much more pragmatic in terms of focusing funds on routes with greater economic returns. The second part of the program to increase rail transport capacity aims to increase production of locomotives and passenger trains. The Ministry of Railways hopes to be completely self-sufficient in locomotive production by the 1990s, with production increasing at least 70 percent and passenger train production increasing 120 percent. Within the plan period, the Ministry intends to open 4,600 kilometers of electric railways, 2,900 kilometers of double-track railways, and 3,500 kilometers of new lines.

Port facilities represent an additional investment need associated with both domestic economic growth and expanded international economic contact. Rapid growth in foreign trade, especially in the 14 coastal cities opened to foreign investment, is straining port facilities. China is addressing the problem by accelerating construction of both inland and coastal port facilities, and by various incentive and management reforms. State investment in port facilities aims to increase port capacity and to improve links with other modes of transport, especially high volume rail lines to the interior. Due to the upgrading completed in 1985, the handling capacity along the Yangtze River was 590 million tons, double that of 1984. In addition to state and local monies, the World Bank and Japanese Overseas Economic Corporation Fund are already contributing to port construction, and China is looking for other foreign funding sources. Along the Yangtze River, the State is building ten deepwater wharves at large ports for foreign trade.

A development strategy integrating different modes of transportation is being stressed for the ports which serve the inland regions, as opposed to Shanghai or Tianjin, which primarily serve nearby industrial production centers. For example, China has promised 870 million yuan over the next five years for the construction of 11 deep-sea berths in Lianyungang Port, Jiangsu Province, which has a direct railway line to Urumqi in Xinjiang province.

Management reforms were introduced on a trial basis in early 1985 when responsibility for managing the port of Tianjin was transferred from state control to the Tianjin municipal government. By February 1986, the test was considered successful. Tianjin had instituted a contract system with subordinate enterprises, had replaced one-third of the port's equipment, and had increased freight volume by 15 percent. The program has been expanded, and announcements early this year indicated that authority over the Shanghai and Dalian ports would be transferred to those cities' municipal administrations.

PROBLEMS

There are two over-arching problems within the transport sector: inadequate levels of investment, and problems that are encountered while using, reforming, or trying to expand the transport network.

Major investments are needed to increase capacity so that the transport shortage will not constrain economic growth. In past years, investment in transport has averaged only 1.1 percent of GNP, which is low compared to other developing nations; Brazil, for example, spends 3.3 percent on transport. The planned scale of investment could double the current ratio.

Reforms and concurrent increases in prosperity have also created problems for transport. With increases in non-state traffic on roads and waterways, more accidents are being reported. Most notable of these accidents have been the sinking of several overloaded passenger boats, with several hundred fatalities. A Ministry of Communications report blamed the accidents on the high incidence of unlicensed boats and the use of boats in disrepair. Income rises have made travel more affordable to peasants, increasing the strain on trains which are carrying up to 150 percent of their seating capacity.

Administrative problems also hamper the development of highway transport. The recent decentralization of responsibility for road construction is not likely to improve the quality of roads, since many localities lack the funding that central authorities can employ. Funds collected as road maintenance fees are used for other purposes, and planning is inefficient because of the differing priorities of the agencies involved.

Inefficient use of existing capacity plagues the transport network. The level of on-site processing for both lumber and coal, which together account for 40 percent of freight traffic, is very low by international standards. It is estimated that raw logs require 35-40 percent more rolling stock than would sawn timber, leaving considerable room for savings. Likewise, while Japan and western European countries washed or screened over 85 percent of their coal in 1982, China processed only 18 percent. Thus, scarce transport facilities are squandered carrying ash, stones and other impurities to industrial destinations where they are useless.

Another example of the poor allocation of transport resources is excessive reliance on trains to handle inland distribution from seaports. Except for Shanghai's Huangpu River harbor, all harbors currently rely primarily on railways to distribute cargo. Railway transport accounts for more than 90 percent of distribution in the northernmost harbors, 60 percent in Qingdao, and 70 percent in Tianjin. Railway capacity is saturated, while many auto transport departments in the same areas have surplus capacity and lack cargo sources. Relieving backups at harbors, therefore, requires improving the inland distribution system by shifting toward road vehicles and upgrading access to the port cities.

China's 910,000 kilometers of highway are inadequate for the country's needs and are of poor quality. Urban traffic, particularly in large and medium-sized cities, is increasingly congested. Urban road construction cannot keep pace with the increasing number of vehicles. For example, since 1949 roads in Peking have increased 12.5 fold while the number of motor vehicles rose 65 fold and the number of bicycles 31 fold. In recent years the situation has been aggravated by agricultural trade markets and commercial outlets setting up shop on roadways. Possible solutions can cause other problems: a ban on trucks arriving from outside Peking in the spring of 1985 led to a severe vegetable shortage in the capital and the ban had to be lifted.

In densely populated areas, obtaining the rights-of way for new roads has proven to be a problem for the government. The ramifications of condemning arable land and adequately compensating farmers are examples of other obstacles hindering road construction. These problems and the lack of state investment have slowed the pace of road construction considerably over the past five years.

Another set of problems is associated with vehicles themselves. Present truck production levels cover renewal of the fleet on the basis of a ten year life cycle. As traffic increases, vehicles are kept longer, but domestic suppliers remain unable to provide the volume of vehicles demanded. This scarcity has lead to a rapid increase in vehicle imports. The increase in motor vehicles has exacerbated gasoline and diesel fuel shortages; the China National Petrochemical Corporation, SINOPEC, anticipates diesel demand for 1986 to be 4.7 million tons, and estimates that only 2 million tons can be supplied. Similarly, gasoline may fall short of demand by .5 to 1.5 million tons. The production of rolling stock and locomotives faces the same dilemma. In recent years, production has only been able to meet half the combined need for replacements and new additions. To supply short-term needs, imports may have to be considered for both rolling stock and locomotives until local production capacity can be increased.

PROSPECTS

Prospects for transport suggest significant but not explosive growth by 1990 with total freight growing an average of 8-9 percent per year. With increasing per capita income, passenger transport will grow even faster than freight at an estimated 10 percent per year. The Ministry of Communications anticipates that by the year 1990 highway and waterway freight volume will be 1.82 billion tons, up from 836 million tons in 1984, implying an average annual growth rate of close to 14 percent. Transportation volume by rail for both passengers and cargo is expected to grow at only 4 or 5 percent per year over the next 15 years. Despite some potential rationalization, freight needs are expected to grow as fast as output in agriculture and industry. Hence, even if highway freight increases at a modest 12 percent, by the year 2000 the share of total highway transport (State and private) could increase to 20 percent of domestic ton-kilometers, up from 10 percent in 1984. In terms of traffic, the official Seventh Five Year plan calls for 15 percent annual growth for highways, and only 5.4 percent annual traffic growth overall. In sum, the transport system is expected to become slightly less concentrated in the rail sector during the next 15 years.

In light of stated highway traffic goals, existing roads are clearly insufficient and transport officials have announced an ambitious program of new road and highway construction. This includes plans to build 11 major roadways in the next five to six years in Shanghai, Nanjing, Shenyang, Dalian, Hangzhou, Ningbo, Qingdao, Lianyungang, Tianjin, Peking, Guangzhou, and Zhuhai. Completion will bring the total length of highways and 24-meter-wide first-class roads to 2000 kilometers, from almost none five years ago. In another project, a high-grade expressway will be built from Shenyang to Dalian, to be completed by 1990 with investment to total 2.02 billion yuan (300 million annually) starting in 1985. Officials estimate that this will decrease transport costs between these cities by 40 percent.

Success in increasing the share of road vehicle transport will require the availability of adequate fuel supplies. Supplies of liquid fuel are already very tight, and in some cases shortages are hampering the use of vehicles. Even with improvements in fuel efficiency, consumption in the year 2000 could be three to five times higher than in 1980, or 30-50 million tons. Prior to early 1986 the state gave priority to liquid fuel exports as a foreign exchange earner, emphasizing domestic substitution of coal for oil. Following the recent sharp decline in world oil prices this has changed; more crude is being diverted to domestic refineries for domestic consumption in the forms of heating and transport fuels. It is likely, however, that increasing levels of refined product imports will be required as domestic refining capacity falls behind rapidly increasing levels of demand for fuels.

Extensive development of China's waterways is planned for the next five years. Harbor traffic volume is projected to rise 61 percent by 1990 over 1985 levels, under the Seventh Five Year Plan. Construction of 120 deepwater berths and 36 medium and small berths is scheduled, bringing the total number of coastal harbor berths to 542 from the current total of roughly 390. Construction of port facilities will be focused on transport of energy-related materials and foreign trade commodities, including expansion of capacity for the transport of coal produced in the north to the south, and construction of berths for containerized liners. Container transport capacity should increase from 850 thousand to 1.3 million standard containers by 1990, according to official targets.

Prospects for the development of inland waterways are difficult to assess, because, unlike China's railways, development of waterways is under local (provincial) control rather than State control. Under the national plan for 1986 to 1990, however, development of ports along the Yangtze is a major state construction project. The river carries 80 percent of China's total inland water transport, and will be emphasized in China's effort to relieve the strain on the inland waterway system and make better use of existing waterways for transport. The State is constructing ten deep-water wharves for foreign trade along the Yangtze. Other plans include the development of ports in both the Yangtze river basin and Taihu Lake area, the addition of coal berths to four ports, and construction of 20 passenger wharves along the Yangtze. In all, 30 ports are to be built or expanded along the Yangtze and its tributaries.

In sum, the prospects for China's transport system look better than they have in recent years, given the level of resources invested and the variety of approaches involved. Coastal ports, inland foreign trade ports, rail lines near major coal deposits, and commercial aviation facilities are likely to show the greatest gains in the next five years given their current prominence in state investment and construction plans. Growth in roads and inland waterways is somewhat less assured because it depends to a greater extent on local and provincial initiatives to improve the infrastructure. Transport demand will certainly outpace supply, perpetuating intensive use of facilities in the short term.

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CHAPTER ELEVEN - Population

EXECUTIVE SUMMARY

TRENDS	* Migration and definitional changes are speeding urbanization. * Continuing state control over family structure is evident in the reduction in China's natural rate of population increase.
POLICY	* The state is implementing a national ID card system as a population control measure. * Self-employment is encouraged as a method of reducing urban unemployment and under-employment.
PROBLEMS	* Controlling population growth will become increasingly difficult as reforms spread and individual freedoms increase. * The labor force is aging rapidly and a comprehensive retirement system will be needed to support the growing number of elderly.
PROSPECTS	* The demand for larger families as individual prosperity increases will make slowing population growth difficult. * The urban population could be 70 percent of the total by the year 2000.

TRENDS

China's population growth rate, down to 11.23 per 1000 in 1985, is lower than that of most other Third World countries, but it must drop even further if economic gains are to have their planned significance. A rate of 10 per 1000 must be achieved and maintained if the government is to hold the population to 1.2 billion by the year 2000. Measures intended to thwart rural-urban migration have been implemented as China's population continues a rapid urbanization process, which includes the redefinition of villages and towns and the suburbanization of areas around the larger cities. A national ID card plan, aimed at preventing migration and controlling accelerating urbanization, is already being implemented in China's largest cities. The one-child policy, which will help China achieve its target population of 1.2 billion in the year 2000, will also accelerate the rise in the average age of the population. This will compel the State to devise a costly retirement system and an expanded health care program to support growing numbers of elderly people.

China's population at the end of 1985, based on a sample survey conducted that year, stood at 1.046 billion people--22 percent of total world population. This figure indicates a population growth rate in 1985 of 11.23 per 1000, marginally above the previous year's rate and only slightly higher than the goal of 10 per 1000 announced when the one-child policy was implemented in 1979. China's average annual population growth rate for the ten years from 1973 to 1983 was 15 per 1000; therefore, the 1985 population growth rate of 11.23 per 1000 indicates that the major trend in China's population is slower overall growth.

Some analysts have predicted that as incomes rise in China, especially rural incomes, the fertility rate will increase and raise the population growth rate closer to its previous high level. Yet, as incomes increased in 1984-5, the fertility rate increased only insignificantly. This is important because it shows the great success the Chinese have had in controlling the birth rate, which is much more volatile than the death rate and therefore the basic component of population growth.

When compared to population growth rates of other Third World nations listed in the table below, China's 1985 population growth rate of 11.23 per 1000 is significantly lower than both Kenya's (40 per 1000) and India's (23 per 1000). It is only slightly higher than the population growth rates of industrialized nations such as the United States (10 per 1000) and the Soviet Union (9 per 1000).

Table 11-1
WORLD POPULATION COMPARISON

Country	Population 1983 (millions)	Average Annual Population Growth Rate 1973-1983 (per 1000)	Fertility Rate 1983	Life Expectancy at Birth 1983	Urban Population Share 1983 (percent)
China	1019	15	2.3	67	21
India	733	23	4.8	55	24
Brazil	130	23	3.8	64	71
Korea (South)	40	16	2.7	67	62
Indonesia	156	23	4.3	54	24
Kenya	19	40	8.0	57	17
Japan	119	9	1.7	77	76
United States	234	10	1.8	75	74
France	55	4	1.8	75	80
USSR	273	9	2.4	69	65

SOURCE: **World Development Report**, The World Bank, July 1985, pp. 174-217.

Although China's population growth rate has been falling since 1981, it must reach the 10 per 1000 figure and remain there every year until 2000 if the goal of holding the population to 1.2 billion in that year is to be achieved. China's fertility rate of 2.3 children per woman is low compared to India's (4.8) and Brazil's (3.8), but still must drop below the replacement level of 2.1 children per woman if population growth is to continue to decline from now until the year 2000.

The present rural/urban population growth rate differential makes holding the overall growth rate to 10 per 1000 much more difficult. Since 1976, the urban growth rate has ranged from 6.5 to 13 per 1000 while the rural growth rate has ranged from 12 to 15 per 1000. In 1984, urban growth was 9.14 per 1000, but rural growth was 11.17 per 1000. Because the rural population of China in 1984 accounted for 68.1 percent of the total, the relatively high rural growth rate was a hindrance to the achievement of an overall growth rate of 10 per 1000. Continuing urbanization, planned and unplanned, is one factor that will contribute to reduction of the overall growth rate, but only reducing the higher rural growth rate will slow population growth significantly. Some success in this area is reflected in the fact that births during the Sixth Five Year Plan (1981-85) were 14 million below the established ceiling.

More significant than China's overall population growth rate, however, is the remarkable surge in urban population which began in 1979 and accelerated markedly in 1984-5. The urbanization that normally accompanies industrial development was long delayed by Maoist policies, but has now resumed due to recent economic and social reforms. Rapid urban population growth during the last few years is less a result of heavy rural-urban migration so common in other poor countries than of administrative changes: redefinition of rural counties as towns, and enlargement of traditional urban boundaries to include surrounding populations. Thus, rising urban population figures since 1981 are due in part to definitional changes. The state's encouragement of development outside of already overcrowded areas, and a broader, more realistic definition of "urban areas" (used for the first time during the 1982 national census) increased the number of officially defined cities from 245 in 1982 to 300 in 1984. During the same period, the number of counties fell from 2133 to 2069 when the State Council approved the redefinition and consolidation of numerous rural towns and counties into cities as they became more urbanized.

Table 11-2
RURAL-URBAN MIGRATION, 1971-1984

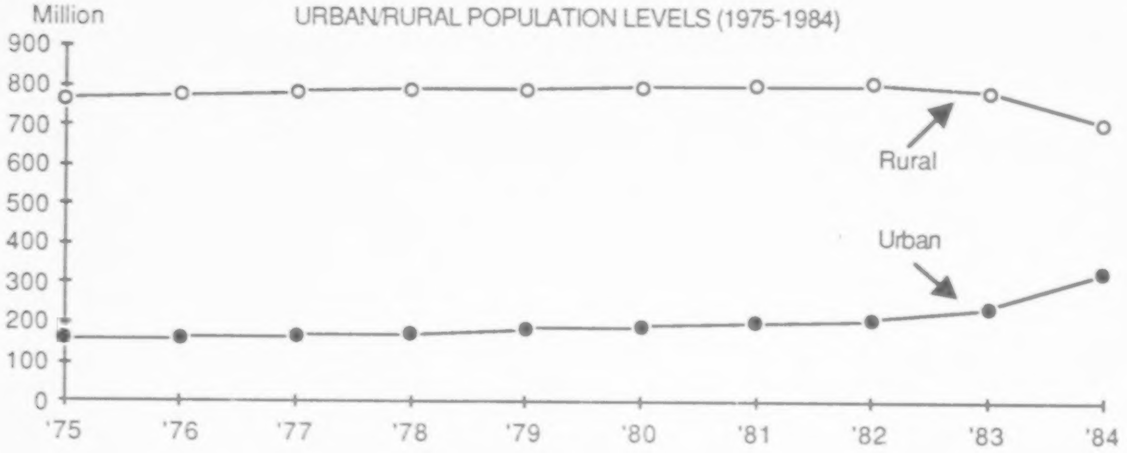
	Population Growth			Apparent In-Migration		
	Total	Urban	Rural	Urban	Rural	Statistical Discrepancy
(Percent)				(Millions)		
1971	2.70	1.99	2.84	.57	2.84	3.01
1972	2.29	1.52	2.44	.18	.84	.59
1973	2.33	2.75	2.25	2.25	.33	2.13
1974	1.85	1.63	1.89	1.08	.24	.89
1975	1.72	2.79	1.50	2.90	-1.22	1.35
1976	1.40	1.94	1.29	2.06	-.45	1.27
1977	1.34	2.01	1.20	1.99	-.49	1.27
1978	1.35	3.46	.91	4.35	-2.69	1.45
1979	1.33	7.25	.04	11.02	-9.18	1.65
1980	1.19	3.66	.66	4.84	-4.58	.05
1981	1.38	5.22	.42	8.15	-8.59	-.69
1982	1.47	4.87	.61	7.22	-7.10	.19
1983	.94	14.05	-2.51	27.59	-29.99	-2.18
1984	.96	36.81	-10.08	86.59	-87.75	-1.16
(Millions)						
1985	1,046.39	na	na			

*NOTE: Apparent migration is calculated from birth and death rates. The statistical discrepancy between urban in-migration and rural out-migration estimates is due to inconsistencies in the official data themselves.

SOURCES: Official State Statistical Bureau data. (J5AD19.T5A, J5AD41.T5J)

The statistics in Table 11-2 provide a dramatic illustration of the urban population's extraordinary growth. The number of people living in cities and towns has grown much more rapidly than would have been the case without rural-urban migration and the creation of new urban areas. In 1983, 1984, and 1985 the population living outside cities and towns actually declined. Official data on births and deaths permit the calculation of apparent migration flows, and the shift in 1984, the last year for which migration data are available, affected nearly 90 million people. The data for recent years show that migration is increasing as rural dwellers take "temporary" jobs in cities to start new businesses, or to find jobs in the commerce, service and housing construction trades. The urban construction boom has caused a shortage of labor in the cities. Urban construction companies readily hire contract labor, drawing rural youths to the cities where they can earn higher wages than they otherwise would in the countryside.

Diagram 11-1



More than 3.2 million people have recently taken up temporary residence in China's 10 largest cities, accounting for over 10 percent of their total population. One survey in Peking reported that 75 percent of the "temporary" residents in one section of the city had already been living there for more than six months. A brief surge of 11 million new urban residents occurred in 1979 when, for a short time, there was some freedom to migrate. This 1979 movement has more than historical significance, however, because it may shed some light on the composition of the current rapid urban population increase and rural population decrease. There is much more freedom to migrate now than there was in 1979, in spite of official pronouncements to the contrary, and migration has had a greater role in current urban population growth than administrative redefinitions have had.

Movement to large cities has been discouraged and even punished. Many areas once classified as villages have been redefined as towns; in some instances, whole counties have been given urban status, and existing cities and towns have expanded their borders. Even though the State Statistical Bureau reports that the sharp increase in urban population is due primarily to the "many newly-established towns resulting from readjustment in the criteria for determining urban towns," personal observation, reports from various

Chinese sources, and 1979 data all indicate that much of the urbanization is substantive and implies important lifestyle changes. Whatever the rural-urban population mix is at this point, the statement that "China is 80 percent rural" can no longer be tossed out as a quick and easy characterization of China's population. Prospects are good that within at least five years, more than half of China's population will be living in urban areas.

There have been indications that the one-child per family policy is being relaxed in some cases and in some areas. Although some relaxation is officially sanctioned, some is also due to local family planning officials, who reason that recent strong economic growth obviates the need to restrict couples to one child, slackenening their enforcement of the unpopular policy. However, in Guangdong--a bellwether region with regard to social and economic policies--the local government recently announced that urban couples may have second children under certain conditions that relate to the first child's physical condition, the parents' previous marital status, or their current employment status. Rural couples may now apply for permission to have a second child, which may be granted if they meet the conditions imposed on urban couples or if their first child was a girl. By imposing a restriction that the second child must be spaced at least four years after the first, authorities are implementing recommendations of population experts who indicate that such birth spacing can be as effective as a one child policy in controlling population growth.

The number of elderly persons (over 65) in the total population has grown dramatically. Chinese demographers forecast that there will be a continual rise in the percentage of elderly during the next 15 years, reaching 7.2 percent of the total by the year 2000. In 1982, Japan and the United States had proportions of 9 and 11 percent respectively; however, aging of the Chinese population as a whole will occur much more rapidly that it did in the developed world. By 2038, demographers predict that the proportion of elderly could reach 20 percent if present growth continues. In the heavily populated east and south coastal regions, the proportion of elderly people now exceeds the national average.

Post-reform China is now following the development pattern of national economies known as "early industrializers." The historical experience of such economies shows a progression from an economy dominated by agricultural employment to one dominated by manufacturing employment. In China, the growth of rural village industry (48 percent in 1984) shows that the transition of labor from the agricultural sector to the manufacturing sector is already underway. As rural residents establish transportation, commercial, and repair services, labor will also shift out of agriculture and into the service sector.

A notable increase in the number of self-employed persons is indicative of China's transformation from a centrally planned command economy to a decentralized economy depending on individual incentives and profit motives. In 1984, there were almost 3 million self-employed workers in cities and towns, roughly 30 percent more than there were in 1983. The number of self-employed workers will continue to rise as the state allows more private enterprise and exhorts the people to "get rich."

Regional differences in sectoral employment are expected to become more pronounced as certain areas develop faster than others. Currently, a lower percentage of the work force is employed in agriculture in the coastal and industrial regions than is employed in agriculture in the less-developed interior. Although there have been reports in the Chinese press stating that development priority should be given to the western provinces, especially Xinjiang, development efforts there have been largely political. The recent decision to de-emphasize development in all but the four largest of the fourteen coastal cities shows that it is the traditionally most successful coastal regions that have been targeted for foreign investment, technical progress, and rapid development.

POLICY

China has implemented policies to control population growth, restrict migration to the cities, create jobs for all who are employable, and avoid unemployment in the politically sensitive urban areas. As the Maoist system of ration coupons and state employment loses significance, the recently-announced national ID card plan will allow China to maintain and strengthen its control of the population's movements and activities.

In the Seventh Five Year Plan document released in April 1986, the State outlined its population-related goals for the five years from 1986-90. Among these goals are: 1) holding the total population to 1.113 billion; 2) continuing the family planning program; 3) preventing rural-urban migration by encouraging the peasants to "leave the land but not the village" by developing township enterprises to absorb excess rural labor; 4) encouraging collective and individual production and developing tertiary industry; 5) achieving full employment in cities and towns; and 6) establishing a social security system to care for the growing number of elderly. The Chinese have made inroads in all of these areas, but the one-child policy continues to receive the most national and international attention.

China's ambitious population control plan, under which every couple would be allowed to have only one child, was announced in 1979. The one-child policy was actually only one part of a three part policy which included late marriage and late childbearing provisions. It was intended to be a temporary restriction on family size, allowing the state to slow population growth which, if unchecked, would threaten to negate planned economic gains. This policy was followed by the promulgation of the Marriage Law of 1980, which stipulated marriage ages and required every couple to practice birth control. In April 1984, Document 7, not released to the public, reaffirmed the importance of family planning and the one child policy. It also set broad guidelines for tailoring population control policies to local conditions, indicating some permissiveness in certain situations. In practice, adherence to the birth control policy varies widely because the financial rewards for having only one child differ according to the wealth of the couple's work unit. Incentives for enforcing such an unpopular policy are evidently not uniform.

China's Vice Premier Wan Li recently indicated that population policies would have to take into account differences between rural and urban areas, as well as differences among rural areas themselves. In order to prevent the mass unemployment that would result if the one child policy were to be relaxed, he reiterated the need to pursue family planning even now that the economy is exhibiting strong and steady growth. In an attempt to answer accusations of coercive practices in population planning, the Vice Premier also urged those involved in family planning "to overcome compulsory and coercive conduct and not to harm the peoples' interests."

The one child policy's goals have not changed, but its strict enforcement contradicts another fundamental long-term goal: a future population that has a balanced age structure and a stable labor force composition. Over-zealous population control now will cause a shortage of young workers in the future.

Chinese and Japanese population experts under a United Nations-sponsored research project have concluded that China should readjust its one child policy after the year 2000 in order to prevent a labor shortage and an unusually high proportion of elderly in the total population. In Shanghai the proportion of elderly stands at 14 percent, and is placing a heavy economic burden on former employers. Between 1978 and 1984, Shanghai's pension bill tripled and now accounts for nearly 25 percent of the total wage bill. In addition, city authorities have estimated that each year 76,000 workers retire and are replaced by only 55,000 new ones. Shanghai estimates that it will have trouble renewing its workforce from now until the year 2000.

In order to cap population at 1.2 billion by the year 2000, Chinese demographers realize that it would be necessary to hold the annual population growth rate to 10 per 1000 for the last 20 years of this century. This would require holding the fertility level below the replacement level of 2.1 children per woman for many of those years. The one-child policy was designed to reduce fertility quickly and dramatically so that overall population growth could be centrally controlled. Even though overall population growth has slowed, China's fertility rate was still above replacement level in both 1982 and 1983 at 2.3 children per woman.

The one-child policy could enable China to reach its population goal of 1.2 billion people in the year 2000; however, even the low growth rate of 10 per 1000 required to meet that goal is still considered too high by some Chinese demographers. Some have advocated an "optimum" population of 700 million, which would require a negative growth rate for many years. The result of such a policy would have an even more dramatic and negative impact on China's age distribution than the one-child policy or the current low growth rate.

Recent agricultural reforms have intensified rural resistance to the one child policy. The reforms gave peasants "private plots" and the freedom to sell surplus produce in free markets. As a result, rural families had an even greater incentive to have more family members working their plots, and they found ways to evade the State's one child policy. (Some reports indicated that even rural cadres, who were and still are in charge of enforcing the one child policy, were having larger families to help farm their own private plots.) As a result of conflicting incentives, then, rural residents have resisted the implementation of the one-child policy as their standard of living has risen. This situation has created the potential for explosive population growth, because both the rural birth rate and rural population are already much higher than the urban birth rate and population. The government has addressed this problem by stepping up urbanization, by definitional or boundary changes, by tacitly allowing "sent-down" persons to return to the city (in some cases creating jobs for them), and by adjusting marriage age restrictions.

In an effort to control migration to existing urban centers, the State has devised a national identification card system that met with success in a pilot project in Beijing. It is now being implemented in the larger cities. One of the stated goals of the national ID card program is to ensure "the management of population with modern technology." Currently, each household has a "record of domicile" registration which can only be used locally to prove residency. The national ID card will allow the central government to restrict illegal migration of rural families and individuals to urban areas by recording each person's residence on a nationally recognized card.

For the past 20 years, China's population has been urbanizing despite statistics that have indicated only very slow growth of the urban population. This under-reporting of the urban population was mainly due to unrealistic definitions of "urban areas" which failed to include densely populated regions just outside city boundaries as part of metropolitan areas. By the early 1980s, though, suburban and rural areas that had become increasingly urbanized, especially rural districts close to cities and towns, were redefined as urban areas themselves. The redefinitions caused urban population figures to be revised upward as far back as 1965. A different type of redefinition is now occurring throughout China's countryside. During the past few years, the State Council has been approving the consolidation of many rural counties and towns into cities. The effect of this policy has been to increase the urban population on paper and to bring the reported urban population figure closer to the true urban population, which is increasing even more rapidly as a result of the economic reforms.

PROBLEMS

Controlling the growth of a population already in excess of 1 billion people creates a host of problems, including the possibility that such a huge population cannot be controlled. Chinese officials have already shown that they are determined to slow population growth, and they have produced remarkable results. In the face of rapid economic and social change, policymakers will have to address the population's changing age structure, the composition of the labor force, and the prospect of a society with a great number of only children.

Planners will have to counter the efforts of couples who desperately want more than one child, and who have found loopholes in the one child policy. (For example, there have been reports of workers gaining temporary employment outside their registered residence and giving birth to additional children while away from home.) Reported incidents of female infanticide, enforced sterilizations, and enforced abortions have also damaged the reputation of China's population policy both domestically and internationally.

Even if the one-child policy were to be relaxed soon, the rising average age of the population will lead to serious problems in the areas of health care, retirement benefits, and labor force composition throughout the next several decades. There is already concern that the proportion of elderly dependents in the population will temporarily bulge above its ultimate long-term level. Chinese demographers say that the one-child policy could cause that proportion to reach one third of the total population within 50 years. Yet, there is official encouragement for self-reliance in family care for the elderly, in direct conflict with the one-child policy now in effect. The government has assured parents of only children that there will be a retirement system in place by the time they need it, but it is difficult to see how China could fund a retirement system given the present unfavorable demographic situation. Many Chinese already fear that the typical family of the future will consist of a single child, two working-age parents, and four grandparents, all supported by the two family workers.

The one child policy threatens to alter dramatically the structure and productivity of the nation's labor force well into the next century if it is enforced much longer. The long-term effect of such a policy could be a shrinking labor force that would, in turn, imperil the modernization program. Prolonged low fertility could cause a rise in the average age of the labor force and create shortages of younger, better and more recently trained, more adaptable workers. Not only would the labor force become older and less adaptable to change, but the vast number of new retirees would also have to be supported by fewer, yet supposedly more productive, young workers. It is questionable whether such a situation is possible given China's current education and training system. In late July, it was reported that only primary schooling was universal in Peking but that by 1990 all of the city's children should receive a senior middle school education. One result of such an inadequate education system is an illiteracy rate in 1982 of 32 percent of the population over 12 years of age.

Other undesirable side effects of the one child policy include the widespread occurrence of behavioral problems of a growing number of only children, the destruction of time-honored ancestral lines, and the possibility that miracle economic growth may be precluded by the inability of the Chinese family to realize the economic benefits of vertical extension.

The problems of creating enough jobs for surplus rural labor and of maintaining low urban unemployment are the major employment problems that Chinese planners will be facing as a result of otherwise advantageous population and economic policies. According to Zhao Dongwan, Minister of Labor and Personnel, China will have to create 45 million urban jobs during the Seventh Five Year Plan period -- 10 million more jobs than were created during the Sixth Five Year Plan period. Of the 45 million jobs that will have to be created, 30 million will be for newcomers to the job market and 15 million will be for workers released by State-owned enterprises over the next five years. Although the government has adopted strict new measures to prevent a continuing influx of surplus rural labor into the cities, an estimated 100 million rural farmers may pursue jobs other than farming during the next five years. The State Minister of Labor and Personnel also stated that the key to finding or creating enough productive jobs in order to keep the unemployment rate low lies in reforming the employment system and in pooling the efforts of the State and collective and individual enterprises. He added that the collective, individual, and service trade industries should be actively encouraged to create more jobs.

Statistics show that the urban unemployment rate dropped from 4.9% in 1980 to 1.8% in 1985, but the rates do not accurately reflect real unemployment. This is due to the fact that China enforces a rather strict segregation between the urban and non-urban segments of the population. Because only registered urban persons are eligible for urban state jobs and benefits, only they are counted as "waiting" for employment. The urban unemployment rate is further distorted by the large number of workers officially attached to "production units" which have little, if any, productive work to do.

New economic freedoms and improvements in transportation have made it possible for peasants to live in urban areas despite strict restrictions prohibiting migration to the cities in order to seek permanent residence. An increasing number of peasants, whether or not they constitute surplus rural labor, do find temporary urban employment as urban enterprises increasingly hire lower paid contract workers from the countryside. However, these workers do not receive the benefits that registered urban workers do, and they have no job protection. If they lose their jobs, they are not counted as unemployed and are expected to find their way back into the rural labor force, which is essentially left to its own devices, especially since the abolition of communes. In order for the state to prohibit migration and limit the growth of existing urban centers, it will have to carefully monitor housing or enforce draconian check systems like South Africa's. Urbanization will probably be more rapid than Chinese planners foresee.

PROSPECTS

China's total population is likely to exceed the target of 1.2 billion in the year 2000, given relatively high rural population growth and the low likelihood that the overall population growth rate of 10 per 1000 can be reached immediately and maintained for the next 15 years. Although rural population growth fell from 15 per 1000 in 1981 to 12.2 per 1000 in 1983, further reductions may be difficult to achieve in the face of reforms that unintentionally create the demand for more family members in the countryside.

As a result of reforms already underway, the urban population could reach 70 percent of the total population by the year 2000, up from 31.9 percent in 1984. And in spite of policies which prohibit migration, Chinese officials expect that more than one third of the urban population in the year 2000 will have migrated from the countryside. Relaxation of urban employment and marketing practices will be responsible for some of the migration. In addition, some of the growth of the urban population will be due to suburbanization, the redefinition of dense rural areas as urban areas, and the creation of smaller cities and towns in the countryside where excess rural laborers will find non-agricultural employment. Already, one fifth to one third of the industrial production in Shanghai and Tianjin occurs in suburban districts.

As the one child policy is continued and smaller families are advocated, it can be expected that the proportion of elderly will eventually rise to 20 percent of the total population from today's 5 percent. Before that takes place, however, the state will have to establish some sort of social security system to allay the fears of parents of only children. The number of non-working people supported by every 100 workers is expected to decline slightly over the next 50 years from 63 to 58. However, whereas the number of children supported is expected to halve during that period, the number of elderly is expected to increase four fold. The cost of such support would be staggering. The state's current health care system will have to be upgraded and expanded just to handle the large number of older persons, which could reach 240 million by the year 2000.

Social attitudes will change even more rapidly as the population grows and the economy modernizes. The traditional idea of submission to authority may already be changing in some one-child families as only children are given the best the family and the State have to offer. China's political system may have to yield to the demands of a population and workforce accustomed to the largest degree of individual freedom allowed in China since the founding of the People's Republic in 1949. Only children could become the type of people least adaptable to life under a political system that demands conformity, ideological purity, and self-sacrifice for collective welfare.

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